DOCUMENT RESUME

ED 255 024 EC 172 083

TITLE ICN Interact Outreach Project. Final Report, July 1, 1983-August 30, 1984.
INSTITUTION Children's Hospital Medical Center of Northern California, Oakland.
SPONS AGENCY Department of Education, Washington, DC.
PUB DATE Aug 84
GRANT G008301519
NOTE 130p.
PUB TYPE Reports - Descriptive (141) -- Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC06 Plus Postage.
DESCRIPTORS *Disabilities; *High Risk Persons; *Infants; *Intervention; *Neonates; *Outreach Programs; Parent Education; Program Effectiveness; State Programs

ABSTRACT

The report presents accomplishments of a program to stimulate new and improved services to high risk/handicapped infants (0-3), with specific emphasis on new intervention and followup services to chronically hospitalized premature babies in intensive care nurseries (ICNs). Following a summary of project accomplishments (including the provision of training and technical assistance at six replication sites) and unanticipated spinoffs, the activities completed are described. The evaluation of five project objectives are addressed: (1) awareness activities designed to show the benefit of developmental services for high risk/handicapped newborns and their families; (2) replication of the model of developmental intervention and followup for high-risk/handicapped newborns; (3) inservice training for nurses, infant developmental specialists, physical and occupational therapists, and others; (4) product development and dissemination; and (5) stimulation of state involvement in services for this population. The bulk of the document is composed of sample project brochures, materials, and parent guides. (CL)

FINAL REPORT

ICN INTERACT OUTREACH PROJECT

U.S. Department of Education Grant #G008301519
CFDA 84.024B
July 1, 1983-August 30, 1984

Nancy Sweet, Project Director
Child Development Center
Children's Hospital Medical Center
Oakland, California

ICN INTERACT OUTREACH PROJECT

FINAL REPORT

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ICN INTERACT OUTREACH PROJECT

OUTREACH PROJECT GOAL AND OBJECTIVES

Project Goal

The goal of the ICN Interact Outreach Project is to stimulate new and improved services to high risk/handicapped infants ages birth to three, with specific emphasis on new intervention and follow-up services to chronically hospitalized premature babies in Intensive Care Nurseries.

Project Objectives

1. To stimulate awareness, in California and nationwide, of the need for and benefit of new and improved developmental services for high risk/handicapped newborns and their families.

2. To stimulate and assist replication of the project's model of developmental intervention in the ICN and follow-up for high risk/handicapped newborns.

3. To provide a multilevel professional inservice training program in ICN developmental intervention and follow-up for nurses, infant developmental specialists, physical and occupational therapists, and others who might provide new and improved services to high risk/handicapped newborns.

4. To revise and disseminate project materials for training purposes and to develop two new training products which will facilitate the provision of new ICN developmental intervention services.

5. To stimulate state involvement in new and improved services for high risk/handicapped newborns through a) development of a regional and statewide infant network, b) state level advisory board participation, c) California First Chance Consortium activities, d) impact on policy formation in the California Departments of Education, Health and Human Services, and Developmental Services and e) participation in legislative study and planning for improved services to high risk/handicapped newborns.

ICN INTERACT OUTREACH PROJECT: 7/1/83-8/30/84

SUMMARY OF ACCOMPLISHMENTS

1. All outreach objectives were met or exceeded. All major activities were completed as proposed and minor slippages or modifications were more than exceeded by unanticipated spin off successes. The project was an effective impetus in California for improved services to high risk newborns.

2. Awareness level activities targeted 57 tertiary and secondary NICU's in California with particular emphasis on northern California. In 1982 an estimated 30,000 newborns in California required intensive care, of which approximately 10,000 required tertiary level care. More than 300 target audiences, including the 57 NICU's, received information and products from the ICN Interact Outreach Project.

3. A three-level training program on developmental intervention with high risk newborns was provided to multidisciplinary professional target agencies in northern California. Level I or introductory training was received and very highly rated by 361 professionals at 5 presentations around northern California. Twenty-three key NICU professionals completed Level II training and 7 completed Level III training.

4. Six potential replication sites, serving at least 1500 predominantly very high risk infants per year, received training and on-site technical assistance in initiating a developmental intervention program in the NICU. Of these one successfully established and secured funding for an infant development specialist role in the NICU within the outreach year, and two additional NICU's for the following year.

5. Several products including a guide to infant development in the NICU, a slide curriculum for NICU nurses and training videotapes were completed and disseminated to NICU's and other agencies as proposed. A major spinoff of the outreach project was a subsequent contract with the California Health Department to prepare a slide/tape presentation for parents of acutely ill NICU babies. This presentation was distributed to every tertiary NICU in the state.

6. Project staff also had direct contact with hundreds of diverse additional professionals through more than 20 presentations at conferences, professional meetings, legislative committee meetings, and other events. This included organization of a major regional conference on infants with special needs attended by more than 250 professionals.

7. Project staff were able to make significant contributions to state planning, networking, and legislative efforts to improve services to infants with special needs. A key role was to advocate for planning and services to the at-risk as well as clearly disabled infant, with an emphasis on inter-agency coordination at the state and local levels.

UNANTICIPATED SPIN-OFF BENEFITS

1. As a result of outreach efforts project staff subsequently were asked by California's Maternal and Child Health Branch to develop a slide/tape presentation for parents of acutely ill NICU infants. This presentation is being distributed to every tertiary NICU in the state. Requests from the field have already been received for wider distribution.

2. Utilizing project outreach materials a joint project at a non-replication site is being planned ay a local special education office an a secondary NICU to initiate a developmental intervention program in the hospital.

3. Though unanticipated in the outreach application, project staff were instrumental in planning and accomplishing a major state conference: "The Spectrum of Special Developmental Needs in Infancy: A Multidisciplinary Perspective" which was attended by more than 250 professionals.

4. Project staff contributed via committee participation, development of an infant network, and legislative testimony to significant progress during the year toward improved statewide services for infants with special needs. A major piece of legislation was successfully passed, though vetoed by the governor, and will be followed by subsequent legislative efforts which are likely to succeed. Services to high risk infants are part of the planning purview.

REVIEW OF PROJECT OBJECTIVES

Objective 1: To stimulate awareness, in California and nationwide, of the need for and benefits of new and improved developmental services for high risk/handicapped newborns and their families.

Although perhaps the most difficult to quantify, awareness activities in a new early intervention field may have the broadest benefit to the target population. Each conference presentation, journal article, newspaper article or public testimony brings the need for new services and approaches to the attention of others. Awareness level activities during the completed outreach year have been even broader in their audience than anticipated, reaching not only professionals working in the NICU's in California but other professionals and decision makers as well.

The primary target for awareness activities were the 24 tertiary and 33 secondary NICU's in California, with particular emphasis on the northern half of California. In 1980 these NICU's treated 28,000 newborns, of whom 7,900 were considered at particular risk since they required tertiary level care. Later statewide statistics, done in 1982 by the Health Department estimates an increase number, close to 10,000 infants, who required tertiary care. In our own tertiary NICU, one of the largest in the state, we have observed a significant and dramatic increase in the number of very small and very sick newborns who are being saved, then requiring longterm intensive care. From this is emerging a new population of chronically hospitalized "high tech" babies who go home requiring oxygen, monitors, gastrostomy feeding and other specialized medical care. The impact on infant development and the emerging parent-infant relationship is undocumented but worrisome. Outreach to the field to recognize and prepare for the special needs of these newborns and their families is very timely.

ACTIVITIES COMPLETED

1. Dissemination of informational materials. As proposed an informational packet (brochure, brief model description and summary of outreach services) was sent to more than 300 potential target audiences, including 57 primary target tertiary and intermediate NICU's and to regional centers, health deparments, infant development programs, neonatal follow-up programs, county California Children's Services offices, related educational agencies, perinatal organizations and others.

More than 100 responses from organizations and individuals have been received requesting further information, technical assistance, training or training materials.

2. On-site visits were arranged for personnel wishing to initiate developmental intervention or follow-up services for ICN graduates. The number of on-site visits, as proposed, was severely limited due to the nature of the NICU critical care functions and risks of infection. Nonetheless 20 visitors including 3 from other states were given on-site demonstrations ranging from 2 hours to 2 days.

3. An introductory course in developmental approaches with premature babies was offered, with a particular target audience of nurses and other professionals currently working in NICU units. Nurses received continuing education credit for the 4 hour course after completing a pre-post test. The outreach project greatly exceeded its objectives in this activity. The course was offered at 5 tertiary NICU locations in northern California, with nurses and professionals from outlying hospital and community agencies actively invited to attend. More than 361 professionals attended. Evaluations completed by 217 participants rated the course at 9.02 on a scale of 1-10, with 10 being equated to excellent.

Additionally, videotpaes of the course were requested by 5 hospitals, to offer the course to nurses who were not able to attend the live session. These nurses also could obtain continuing education credit by completing a pre-post test. The course, target audience and evaluation are described in more detail under Objective 3.

4. An outreach product: "Developmental Steps, a Guide to Infant Development in the Intensive Care Nursery" was disseminated as proposed to the directors of nursing at California's 57 tertiary and secondary ICN's, and to other key audiences. This activity is described in detail under Objective 4.

5. Professional and public presentations have been made by project staff at conferences, meetings and in the media. More than 20 additional presentations were made to professionals, students, public groups, ranging from 10-150 in size. All project staff participated in these presentations which were provided to local and statewide planning groups, professional organizations for educators and for nurses and other hospital personnel, professional conferences, graduate classes and legislative committees.

6. A professional journal article on developmental intervention in the NICU was solicited by the Neonatal Network Journal and has been prepared by Kathy VandenBerg, External Outreach Coordinator, for spring publication. Additionally project staff have been asked to review relevant journal articles submitted for publication.

7. Products proposed for revision or development in the outreach year were disseminated as proposed. These products, described under Objective 4, included the manual for parents mentioned above and a slide/tape curriculum for nurses.

8. Proposed joint outreach activities with Project Welcome at Wheelock College, Boston, which were to include a joint presentation at the December 1983 HCEEP conference and a joint paper on professional competencies, were not achieved as proposed. The constraints of distance and time restricted the ability of the two projects to work closely together. Significant though interesting differences also emerged in the outreach audiences of the two projects, limiting the feasibility of a joint paper on competencies needed for developmental intervention in the ICN. Project Welcome evolved a model of training existing NICU nurses while the ICN Interact Project evolved a model which employed an infant development specialist (of any professional background) as a special resource in the nursery.

9. In addition to the proposed awareness activities the project participated in presenting an unanticipated state conference on infants with special needs. (See Objective 5). The conference was planned as an interdisciplinary professional level conference with several sessions on premature and chronically ill infants. It was well attended by nurses and other professionals, and very positively evaluated.

1) Process Evaluation

Seven of the eight proposed types of awareness activities were accomplished as proposed. The project far exceeded expectations in its primary awareness activity, the introductory course to developmental intervention in the NICU. It also provided an unanticipated regional conference. More than 300 target agencies were reached by awareness activities during the year with estimated direct personal contact with more than 750 professionals through courses, on-site visits, conference presentations and meetings.

2) Impact Evaluation

More than one hundred responses have been received to date requesting more information, technical assistance in establishing new services, training or training materials. One new program, which is a collaborative effort between a secondary NICU and a special education office in Bakersfield, has requested replication level assistance solely as a result of outreach materials and activities. This program was not among the original proposed replication sites.

General response to outreach has been active and positive. Awareness of the need to identify developmental needs of premature and other chronically hospitalized newborns is growing rapidly on the part of nurses and other professionals in the NICU. Professionals outside of the NICU are also attempting to learn more about this population and to identify service needs post-discharge. State agency personnel and decision makers are also beginning to recognize the need for planning and service systems for the high risk infant population (see Objective 5). ICN Interact Outreach Project activities have been a significant factor in achieving these changes.

3) Resources Effectiveness Evaluation

Since this is a new area of outreach aimed at several professional disciplines and agencies, we proposed to examine the question of costs and benefits of different types of awareness activities. Our conclusions are as follows:

1) As we expected, mailed materials often do not reach the right people or enough people in busy NICU's. Conference presentations and journal articles were much more effective in reaching desired targets than were direct mailings.

2) Communication links for professionals in the NICU setting beyond their own interal staff relations are fairly rigidly determined by professional category. Outreach to nurses is most effectively done in nursing journals and nursing conferences, particularly if a nurse is involved in the presentation.

3) Simple audiovisual materials seem to be more effective awareness and training techniques than written materials. Slide-tape presentations were particularly effective, perhaps due to widespread availability of equipment and ease of use. Since NICU procedures change rapidly these costly media materials run the risk of being outdated quickly.

4) Introductory courses with CEU credits were a particularly effective way to reach NICU nurses. In California nurses must meet continuing education requirements for licensing. Offering the course on-site in coordination with the nursing inservice education program encouraged good attendance. It must be remembered, however, that NICU nurses work in shifts around the clock, so the most complete attendance is achieved by repeated presentations or live and videotaped presentations.

5) Awareness level activities were successful as an introduction to the area but implementation of developmentally appropriate approaches rarely occurred, even with more advanced training, without one or two individuals who could be responsible for follow-through.

In Summary:

Given limited personnel resources, professional conference presentations and journal articles appear to be the most cost effective outreach approaches. On site introductory courses with continuing education credit are the most effective if personnel time can be made available. Simple media presentations, such as slide-tape presentations are also effective, although they are much more costly in preparation and may become outdated as basic NICU procedures change. Direct mailing of written materials is least effective, probably because circulation around the unit is unlikely.

REVIEW OF PROJECT OBJECTIVES

Objective 2: To stimulate and assist replication of the project's model of developmental intervention and follow-up for high risk/handicapped newborns.

As proposed, in this initial year of outreach funding a minimum of two and maximum of six hospitals were to be assisted in replicating in-hospital and/or neonatal follow-up model components. Then 2-5 replication sites were to be chosen for individual assistance.

Training was proposed as an essential replication activity, with potential replication sites receiving several levels or intensities of training: Level I, introductory courses for nursery personnel; Level II, intensive two day workshops with on-site follow-up for 2-6 key nursery staff; and Level III, individualized training. The training program is described in more detail under Objective 3. Level II and III training were to be provided to selected replication sites, with the option of even more intensive training preparatory to certification in use of the Assessment of Preterm Infant Behavior (APIB) for those nurseries which could initiate an NICU infant development specialist role within the year. Replication sites were also provided with training materials for nursery personnel not directly involved in the training program. These materials, including a slide/tape curriculum for nurses, videotapes and developmental guides for parents, are described in Objective 4.

Selected replication sites were to receive monthly individualized training on-site or at the demonstration site. Assessment and individualized programming were to be implemented for at least 10 infants in the replicating nursery and an impact evaluation was to be completed by the Outreach Coordinator.

Activities Completed

All activities included under this objective were completed as proposed. Although a number of nurseries expressed interest, five were selected as potentially ready to plan and implement new services. These included:

1) Valley Children's Hospital, Fresno
2) Children's Hospital of San Francisco, San Francisco
3) University of California Medical Center, Davis
4) Stanford University Hospital, Palo Alto
5) Alta Bates Medical Center, Berkeley

An additional potential replication site, 6) Kern Medical Center, Bakersfield, was given special assistance in initiating a program as a joint effort with the Kern County Department of Special Education. This program was initiated after allocation of outreach resources for the year, but due to the special nature of this joint project this new replication site was assisted in every way possible within the funding timeline. Additional training was provided also for nursery staff in our own nursery. Twenty-four nurses participated in Level I training and 2 nurses were provided with intensive 2 day Level II training.

Of the five selected potential replication sites four, all but Alta Bates, are large (20-40 beds) tertiary NICU's serving the sickest neonates in a broad geographical area of northern California. Alta Bates is a perinatal regional

center for high risk deliveries with a comparatively large (8 bed) and advanced secondary care nursery. Collectively these nurseries treat approximately 1500 premature and other sick newborns each year.

All five potential replication sites completed Level II training, with on-site follow-up. Two nurseries, Children's Hospital of San Francisco and Alta Bates were provided with Level III training, with Children's pursuing additional training and certification in the APIB. A third potential replication site, Valley Children's Hospital, was successful in obtaining internal support for an NICU infant specialist position and is proceding with replication although this occurred after completion of our outreach funding.

Evaluation

1) Process Evaluation

Replication goals were met or exceeded in the development and selection of potential replication sites, provision of Levels I, II, and III training, and on-site follow-up. Due to difficulties regularly encountered in scheduling training times for nursery personnel, our ability within the funding year to provide long-term on-site follow-up was limited.

Project staff were particularly pleased at the multidisciplinary composition of potential replication site staff receiving training. Nurses were the primary recipients but physical and occupational therapists, social workers and physicians also participated. Two replication sites succeeded in establishing infant development specialists in their nurseries.

Outreach activities with potential replication sites are summarized in the chart which follows.

2) Impact Evaluation

This was the first year of outreach funding to encourage replication in a new program setting, the NICU. Therefore outreach staff attempted to set realistic goals in replication efforts, concentrating additional efforts on awareness level activities, training, and product development. Scheduling of training programs and alterations of nursery staffing are slow and difficult. This is particularly true for achieving precise model replication since there currently is not a funding base for educational/developmental personnel in the NICU. This means that a hospital or other subsidy must be obtained to establish an infant development specialist position.

Given these constraints outreach efforts were judged successful because by the end of the year two nurseries had established or were establishing an infant development specialist position and extensive training preparatory to certification in use of the Assessment of Preterm Infant Behavior had been provided for one. APIB training also was provided for a physical therapist in our own nursery.

Additionally, an unanticiapted replication site, Kern County Medical Center has been identified and assisted in initiating replication. Requests for technical assistance, materials and training are being received from nurseries in a number of other western states and 9 additional NICU personnel have requested APIB training.

SUMMARY OF OUTREACH ACTIVITIES WITH POTENTIAL REPLICATION SITES

Potential Replication Sites	Level I Training (4 hours)		Level II Training (16 hours)		On-Site Follow-Up	Level III Training (individualized)			APIB Training (individualize	
	#	disciplines	#	disciplines	length	#	length	discipline	#	discipli
1. Valley Children's Hospital, Fresno	30	nurse social worker p.t. administrator	3	nurse p.t.	one day					
2. Children's Hospital San Francisco	attended northern California presentation below		4	nurse physician psychologist		2	four day	psychologist nurse	2	psycholo-gist M.D.
3. University of California Medical Center, Davis (and outlying secondary care nurseries)	90	nurse social worker p.t., o.t. physician administrator	3	nurse	one day					
4. Stanford University Hospital, Palo Alto	17	nurse p.t. administration	6	nurse p.t.						
5. Alta Bates, Berkeley	attended northern California presentation below		5	nurse p.t.		2	five days	nurse		
6. Children's, Oakland	24	nurse,	2	nurse					1	p.t.
7. All other northern California NICU's	200	nurse social worker p.t., o.t. physician administrator psychologist educator								
TOTALS	361		23			4			3	

Training sessions for 361 NICU personnel from a variety of disciplines have also resulted in increased demand for training, conference presentations, papers and training materials. A significant spin-off was a request and contract from the state Maternal and Child Health Department to prepare a slide/tape show for use by every tertiary NICU in the state.

Potential replication sites included most of the teritary level NICU's serving the whole northern California area and at least 1500 acute care infants each year. Only Mount Zion Hospital and U.C. Medical Center, San Francisco were not included among tertiary level replication sites, and some of their staff attended the northern California Level I training. As a group these nurseries represent a good cross section of California NICUs, including smaller (20 bed) to very large (40 bed) tertiary units and a secondary unit. Several (Stanford, Children's SF, and Alta Bates) deal primarily with urban populations while two (Children's, Fresno and U.C. Davis) deal primarily with rural populations. Their populations are also reflective of the cultural, ethnic and socioeconomic diversity of California.

As indicated in the preceding chart, a total of 23 personnel in 6 nurseries (including two nurses from our own nursery) were provided with intensive Level II training to enable them to observe and plan NICU interventions in an individualized way. This group included nurses, physical therapists, a developmental psychologist and a physician. Four people from two nurseries received individualized Level III training and three from two nurseries received intensive APIB training.

On-site impact evaluations completed by the outreach coordinators indicated that the intensive training provided a major impetus for change in all nurseries. The general level of concern about developmental factors was increased an there was a great deal of interest in modifying caregiving procedures.

The two major problems which delayed or limited effective replication were anticipated from the beginning of the outreach project:

1) implementation was not as successful in nurseries unable to pursue complete replication by establishing a specialized infant development specialist role in the nursery. Follow through was not as successful if developmental responsibilities were merely added on to existing nursery responsibilities. This was true even for key nursing specialists with more flexible responsibilities than regular staff nurses. These staff usually needed greater expertise in infant development, and could not be freed up for the training in infant assessment which was essential for an individualized intervention approach as defined by our model.

2) several nurseries experienced conflict as to which discipline already within the nursery should take on infant development specialist responsibilities. Typically the question was whether a physical therapist or a nurse specialist would be most appropriate. Our experience indicated that unless a nursery happened to have an individual with exceptional interest and experience in this area, neither discipline could take on this role without extensive training. Professionals who lacked training in infant development generally could not be prepared adequately for the infant development specialist role with the project's outreach resources.

Replication was most successful when an infant development specialist role could be established in the NICU. This permits maintenance of a consistent developmental focus in the NICU setting. In the two successful replications 1) a developmental psychologist with responsibilities in neonatal follow-up was able to take a more active role in the NICU after training and 2) after Level II training for a core staff of nurses and physical therapists in the NICU a position was funded by the hospital, to be filled by a specialist with a Child Life degree. (This advanced degree prepares personnel for work with hospitalized children). In each of these nurseries hospital administration was successfuly convinced of the importance of this role, to the extent that they would fund these non-traditional positions.

3) Resources Effectiveness Evaluation

As proposed, outreach project staff also evaluated the effectiveness of the use of its resources with different types of replication sites, and in outreach activities generally. General conclusions are as follows:

1) Not unexpectedly, intensive individualized training is necessary for successful replication of this new developmental role in a medical setting. Existing professions are not trained in developmental assessment and intervention procedures applicable to this new population. Additionally, a background in infant development is an essential prerequisite for effective on-site training.

2) Media preparations (written materials, videotapes and slide/tape presentations) are effective outreach tecniques for introductory level training but direct observation and training are essential to more advanced training and replication. Media preparations are particularly useful in reaching the large numbers and different shifts of NICU nurseries.

3) As described under impact evaluation, intensive training is most warranted when a specialist role can be established. Such training provided to even a core group of existing nursery personnel is helpful but not as effective.

4) Due to the nature and medical necessities of the NICU, large scale on-site training programs are not feasible. Our experience was that even a group of six trainees familiar with NICU procedures was disruptive to our nursery operations. Large scale training is best done in the nursery whose staff are being trained, though demonstration and training are easier for project staff if done at home, where they know babies, staff and protocols. Although labor intensive the best training approach is an individual long-term tutorial in either the outreach or training nursery. This clearly is warranted only when an infant development specialist role can be established in the nursery requesting training.

5) Establishment of an infant development specialist role is most feasible and appropriate in the larger tertiary units which care for the chronically hospitalized newborn. It may also be feasible in larger nurseries which incorporate smaller secondary and tertiary units. Until a consistent funding mechanism is available expansion of this needed developmental program will be difficult and inconsistent. Concern with rising hospitalization costs make it extremely difficult to persuade hospital administrations to subsidize new positions, particularly in non-medical services.

Although there is a rapidly growing demand for outreach in this area project staff decided not to pursue subsequent years of outreach funding. This decision was made because of adverse impact of the outreach program on the direct services program. In this new and specialized area, staff had no choice but to perform both roles. The intensity of training required for effective replication resulted in disruption of our nursery and developmental program. Project staff decided to focus instead on perfecting and expanding our clinical program and preparing to do applied research to support the value of NICU intervention programs.

Though additional outreach funding is not being pursued, individual staff members continue to work in accordance with the outreach objectives identified in this program. A major spin-off, for example, was the request and funding by the state Health Department for a slide/tape presentation for parents of acutely ill NICU babies, to be distributed to every tertiary unit in the state. This and other media, conference and journal contributions, as well as state-level planning for the high risk infant continue the benefits of the initial year of outreach funding.

ICN INTERACT OUTREACH PROJECT: 7/1/83-8/30/84

REVIEW OF PROJECT OBJECTIVES

Objective 3: To provide a multilevel professional inservice training program in ICN developmental intervention and follow-up for nurses, infant development specialists, physical and occupational therapists and others who might provide new and improved services to high risk/handicapped newborns.

Since the NICU is still a very new arena for early intervention, training for professionals in that setting was proposed as a major outreach activity. A three level training program was proposed which provided a continuum from introductory training (Phase I) to intensive training for core NICU personnel (Phase II) to the individualized training in infant assessment and intervention necessary for replication of the project (Phase III).

Activities Completed

All activities were completed as proposed. Desire for training exceeded our original expectations. Training efforts were judged extremely successful based on 1)numbers participating 2) multidisciplinary composition of the professional group receiving training and 3) evaluations completed by training recipients.

A total of five Phase I workshops were presented around northern California during the year. The Phase I workshop provided a four hour course with continuing education credit to introduce NICU and community professionals to developmental intervention in the NICU. These five Phase I workshops were attended by 361 NICU nurses, nursing administrators, physical and occupational therapists, physicians, social workers, psychologists and teachers. Many additional NICU nurses also completed Phase I training via videotapes of the course.

Evaluations of Phase I training were completed by 217 participants. The average overall rating for the 5 workshops was 9.02 on a scale of 1-10 with 10 equated to an excellent rating. A very brief sample of evaluation comments is as follows:

"This course has enhanced my knowledge of developmental intervention in the ICN because I knew nothing."

"Very good differentiation of normal and premature infant behavior. Highly specialized area of neonatal development. Excellent content by well prepared instructors. Excellent slides. Very good handouts."

"Course's major strengths were practicality, a reasonable approach to individualization."

"Come to _____ City Hospital! We need you!"

Phase II training provided more intensive (two days with follow-up on-site) and individualized (2-6 participants) training for key nursery personnel in potential replication sites. The groups typically included key nurse specialists and/or administrators from the NICU and other professionals (P.T., psychologist, M.D.) who could either a) achieve replication or b) make significant progress toward initiating a developmental focus in the NICU. A total of 23 professionals from 6 NICU's received this training.

INTRODUCTION TO
DEVELOPMENTAL INTERVENTION IN THE NICU

-A Four Hour Course-

An introduction to approaches and individualized developmental intervention in the Intensive Care Nursery. Included will be discussion of research related to premature infant development, basic infant needs, and specific developmental activities for infants and parents.

Presented by,

ICN Interact Project
Child Development Center
Children's Hospital Medical Center
Oakland, California

Though an Outreach Grant from the U.S. Department of Education

Presenting Staff:

-Kathleen VandenBerg, M.A.-
Infant Development Specialist/Outreach Coordinator

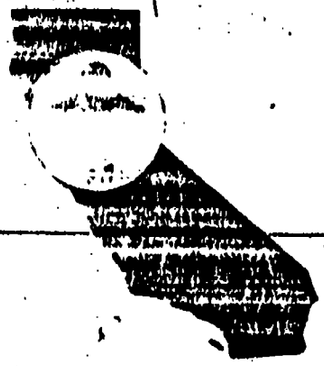
-Bette Flushman, M.A.-
Infant Development Specialist/Outreach Coordinator

DATE: October 26, 1983

TIME:

PLACE:

(4 CE credits available)



Children's Hospital Medical Center
of Northern California

51st and Grove Streets · Oakland, California 94609 · 415 428-3000

I. INTRODUCTION TO DEVELOPMENTAL INTERVENTION IN THE NICU

ICN Interact Project
Child Development Center
Children's Hospital Medical Center
Oakland, California

Course Description (4 hours)

This course is designed to familiarize nurses and other ICN staff with:

1. Theory and research on infant development and early intervention
2. Basic infant needs
3. Approaches and activities for individualized developmental intervention in the ICN

Objectives of the Course

1. To educate ICN staff about the course of normal and premature infant development in the neonatal period
2. To increase ICN staff awareness of the effects of the ICN environment on infant development and parent-infant relationships.
3. To increase ICN staff awareness of their roles as developmental agents in the ICN
4. To develop the following skills:
   a. ability to recognize the stresses that affect infants and parents in the ICN;
   b. ability to recognize individual developmental needs of different types of infants in the ICN;
   c. ability to implement a practical program of developmental suggestions to reduce the impact of the ICN environment and to facilitate infant development.

Methods

Lecture and demonstration. Slide illustrations of developmental activities. Printed handouts of developmental activities. Reference articles.

Children's Hospital Medical Center
of Northern California

[illegible] Oakland, California [illegible]

I. INTRODUCTION TO DEVELOPMENTAL INTERVENTION IN THE NICU

Course Outline

1. Infant Development: Theory and Background

   A. Importance of developmental stimulation in the early months

      1. Plasticity of brain development
      2. Studies on the effects of maternal deprivation and institutionalization on infants

   B. Basic infant needs

      1. Sensory/motor
      2. Environmental/social
      3. Individual differences

2. The ICN as a Developmental Environment

   A. The physical environment

   B. Jeopardized parent-infant relationships

   C. The social environment

3. Comparison of the Developmental Capacities of the Normal Newborn and Premature Infant

4. Developmental Intervention in the ICN

   A. Rationale and goals

   B. Behavioral assessment techniques

   C. Developmental intervention techniques with specific groups of infants in the ICN

   D. Working with parents

   E. The importance of the nurse's role as a developmental agent in the ICN

Phase II training, described in detail in the outreach application, combined didactic, media and observational techniques in the NICU. With Phase I training as a base it provided a significantly more detailed analysis of premature infant behavior and development. It gave these professionals simple methods of infant observation as a basis for individualized NICU infant care. It provided guidance in general NICU intervention techniques and methods for implementation.

Phase III training provided the most intensive training to those nursery personnel ready to replicate the project model. These personnel were identified by their nurseries as potential infant development specialists who could take overall responsibility for developmental intervention in the NICU. Of the seven people who received Level III training three received even more intensive individual training in administration of the Assessment of Preterm Infant Behavior. One of these was certification in APIB administration and a second was judged close to certification reliability by the APIB's primary developer, Dr. Heideliese Als.

Evaluation of Level II and Level III training included on-site observation and completion of infant assessments. The training program was a major component of replication activities and is evaluated under Objective 2.

Children's Hospital Medical Center
of Northern California
51st and Grove Streets Oakland, California 94609 415 428-3000

II. DEVELOPMENTAL INTERVENTION IN THE NICU: Establishing A Developmental Component in ICN Care

ICN Interact Project
Child Development Center
Children's Hospital Medical Center
Oakland, California

Course Description (2 days)

This two day intensive workshop is designed to prepare a core team of 2-6 ICN nurses, therapists or other developmental specialists to establish a developmental component to care in their ICN, particularly for chronically hospitalized babies. The workshop will provide observations of behavioral assessment and developmental intervention techniques. Participants will learn about behavioral capacities of the premature baby, parent-infant interactions and transitions from the nursery setting to the family setting.

Objectives of the Course:

1. To educate core team members in methods for integrating developmental procedures with ICN care, which they can then share with other staff in their ICN
2. To familiarize participants with infant behavioral capacities and purposes of developmental intervention beginning in the ICN
3. To provide an introduction to assessment techniques (infant behavior, parent-infant interaction, environmental) on which to base individualized developmental interventions
4. To familiarize participants with developmental intervention activities appropriate for different types of infants in the ICN
5. To familiarize participants with techniques for involving parents in the ICN
6. To educate participants regarding developmental outcomes, parent-infant relationships and recommendations to facilitate the transition from hospital to family.

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II. DEVELOPMENTAL INTERVENTION IN THE NICU: Establishing a Developmental Component in ICN Care

Course Outline

Session 1. Basics of Developmental Intervention in the ICN

1. Rationale and goals of developmental intervention
2. Developmental intervention v.s. "infant stimulation"
3. Behavioral capacities of the premature baby
4. Individual differences in infant behavior

Session 2. Introduction to Observation and Assessment

1. The infant's environment: assessing the physical and social environment
2. Observing infant responses
3. Demonstration of the APIB (Assessment of Premature Infant Behavior, Dr. Heideliese Als, et al)

Session 3. Developmental Interventions

1. Appropriate interventions for the acutely ill infant
2. Developmental activities with the infant with special needs (SGA, BPD, CNS involvement, etc.)
3. Developmental programs for convalescing infants
4. Special concerns with at term, correct age infants

Session 4. Transitions and Outcomes

1. Work with parents
2. The transition from hospital to family
3. Developmental outcomes
4. Family concerns and resources

Questions and Answers

Phase II - Bibliography

1. Brazelton, T.B.: Neonatal Behavioral Assessment Scale. Clinical Developmental Medicine. No. 50. Spastics Int. Medical Publications, London, 1973.

2. Brazelton, T.B.: Infants and Mothers, Dell Publishing Compnay, New York, 1969.

3. Brown, Diane: Developmental Handicaps in Babies and Young Children, A Guide for Parents, Charles C. Thomas Publishers

4. Caplin, Frank: The First Twelve Months of Life, Grosset and Dunlap, New York, 1973.

5. Holt, K.S.: Developmental Pediatrics, Perspective and Practice; Butterworths, London & Boston, 1977.

6. Klaus & Kennell: Maternal Infant Bonding, C.V. Mosby Company, St. Louis, 1976.

7. Sell, Elsa J., M.D.: Follow-up of the High Risk Newborn - A Practical Approach, Charles C. Thomas Publishers, Illinois, 1980.

8. Home Stimulation and Exploring Materials. Order from: Common Wealth Mental Health Foundation, 4 Marlboro Road, Lexington, Maryland 02173.

9. Getting to Know Your Premature Baby by Sharon C. Metcalf, RN MSW. Order from: S.C. Metcalf, RN, MSW, Child and Youth Project, Department of Pediatrics, University of Louisville, 323 East Chestnut Street, Louisville, Kentucky 40203.

10. Emi-Art Assessment Scale and other materials for infant education for handicapped infants and a curriculum guide for the intensive care nursery. Write to: Wanda Wlder, EEDD, Education for Multihandicapped Infant Project, Department of Pediatrics, University of Virginia Medical Center, Post Office Box 232, Charlottesville, Virginia 22901.

11. Nurses Guide-Developmental Support of Low Birth Weight and Parent's Guide-Developmental Support of Low Birth Weight Infants by Therber & Armstrong, Meyer Center for Developmental Pediatrics Texas Children's Hospital, Houston, Texas.

12. Johnson, Suzanne H., High Risk Parenting: Nursing Assessment and Strategies for the Family At Risk, J.P.Lippencott Company, 1979.

Children's Hospital of San Francisco
Mailing Address: P.O. Box 3805. San Francisco, Ca. 94119

November 24, 1984

A Hospital for Adults and Children

To Whom It May Concern:

I am writing in support of the ICN Interact Outreach Project at Children's Hospital Medical Center of Northern California. I participated in all three phases of their outreach program, and one of our neonatologists and a charge nurse were able to participate in Phase I and II. Phase I was a four hour inservice addressing, "Developmental Intervention in the NICU", Phase II involved direct training and on-site evaluations. Phase III included training in assessment and developmental intervention techniques. I was specifically trained in the Assessment of Preterm Infant Behavior (APIB).

As a developmental psychologist with the NBICU Follow-up Clinic at Children's Hospital San Francisco, part of my responsibility has been to evaluate and plan developmental intervention for our chronically ill babies. Until Children's Hospital ICN Interact Outreach Project there has been no formal training or supervision for positions such as mine in NBICU's. I found the ourtreach training to be very educational, enlightening and supportive.

The educational component strengthened my knowledge around infant development, the ICN environment and its effects on both the babies and on the parent-infant relationship. I now use the ICN Interact assessment tools and we have purchased the slide show of developmental activities and handling. I have used the slide show in a recent two day seminar put on by our Perinatal Outreach Program, and in inservices for our nursing staff and new orientees.

With my training in the APIB, I can now evaluate younger and sicker babies and make recommendations concerning positioning and normalizing the environment as well as developmental activities. Each of these babies receives a positioning care plan which is changed weekly. The NBICU staff is now oriented to, and more sensitive to, these special needs of our babies because of the information and training we have received from the ICN project.

The support received from the staff in the ICN project was also crucial. Because the concept of developmental intervention in the NBICU is so new, and there are only a handful of professionals doing the work, the supervision and advise of these trained professionals was essential.

I feel very fortunate that our staff and NBICU have been able to participate in the ICN Outreach training program. It has given us important skills in

3700 California Street San Francisco (415) 387-8700

assessing the needs of tiny, sick infants and allowed us to intervene earlier and more effectively than we were able previously to do.

Sincerely,

Jan T. Epcar, M.A.

Jan T. Epcar, M.A.
Infant Development Specialist
NBICU Follow-up Clinic

REVIEW OF PROJECT OBJECTIVES

Objective 4: To revise and disseminate project materials for training purposes and to develop two new training products which will facilitate the provision of new ICN developmental intervention services.

Since this is a new area of early intervention, the need for awareness, materials, training materials, and materials for parents is great. When the ICN Interact Outreach Project first began its model demonstration funding almost nothing was available outside research literature on premature infant development and intervention in the NICU. Several good books and slide shows for parents have since become available, but the need for other material continues to exist.

Our intervention approach is not one of "infant stimulation" but instead is based on individual assessment and total environmental modification, with a goal of facilitating the development of parent-infant attachment. It has been influenced by the work of Als, Gorski and Brazelton and opposes a cookbook or formula approach to intervention with tiny premature infants. Any training materials developed had to reflect this orientation.

Activities Completed

The outreach project proposed to revise and develop four products for awareness training and parent education materials:

1) "Developmental Steps: A Guide For Parents to Infant Development in the Intensive Care Nursery" was revised and disseminated as proposed. Preliminary versions of this product developed during model program funding were reviewed, redrafted, illustrated and printed. The manual is unique in presenting parents with methods for helping and interacting with their newborn beginning early in NICU hospitalization. The manual is broken into successive color coded periods, beginning with the critical care phase and following through the transitional days and months post-discharge. A copy of the manual is included with the report.

Unanticipated editing and illustration delays resulted in a delay and no-cost time extension to the grant in order to complete this activity. However, dissemination has been completed as proposed. Copies were sent to each tertiary and secondary level NICU in California, to key agency personnel, regional centers, neonatal follow-up programs and individuals in California. A total of 200 copies have been distributed and requests for additional copies are being received..

The manual has been well received by the nurses and other professionals in our nursery and now is being used with many parents. A copy has been submitted to LINC for review for potential commercial distribution.

2) Training materials for nurses. A second major product proposed for outreach funding was a set of training materials for nurses. As proposed, these materials, consisting of slides and an integrated written manual were revised, field tested in training sessions then made available for loan to other NICU's. A copy of the nurses manual is included with this report.

These training materials have been eagerly received by the NICU's involved with the outreach project. Staff of 10 NICUs have used the materials and 7 NICU's have elected to duplicate the slides so that these training materials would be available for ongoing inservice education. The slide/manual presentation has been commended by these NICU's as a simple and effective training material format.

3) Videotape on premature infant assessment. A third proposed product was a brief videotape of assessment of the premature baby. With equipment and staff assistance for Children's Hospital this product was completed as proposed. The videotape illustrates the successive assessment and handling procedure of the Assessment of Preterm Infant Behavior (APIB) and the subtle responses of the premature baby. The videotape was shown to NICU personnel and was used in training Level III infant development specialists in the APIB (see Objective 3).

4) Videotape on intervention techniques. A fourth proposed product, a brief videotape on individualized intervention techniques in the NICU, was not completed as proposed. Product development (particularly for the parent manual, "Developmental Steps") proved more time consuming within the one year outreach period than anticipated, and greater priority also was given to training/replication activities, for which there was great demand.

As a spinoff of the outreach project, however, this objective was partially met subsequently with even greater effectiveness than outreach activities would have permitted. At the termination of the Outreach grant project staff were awarded a 3 month contract by the California Department of Health and Welfare, Maternal and Child Health Branch. The contract was for development of a slide/tape presentation for use by NICU staff with parents of newborns requiring long-term tertiary care. The slide/tape show was designed as the first introduction for parents to premature infants behavior, and what they can do to help their baby even during the acutely ill phase. The slide/tape presentation was planned so that it could be shown with the recently developed slide show "Prematurely Yours" as a sequel for older preterm babies off respirators. Our slide show, titled "Special Delivery: Understanding Your Premature Baby" will be distributed with a copy of "Prematurely Yours" to every tertiary NICU in California. For the first time these nurseries will have audiovisual developmental guides to assist parents and nurses with premature infant behavior and intervention techniques prior to discharge. Additional requests for copies of the slide/tape show are already being received prior to completion of the product.

Evaluation

1) Process Evaluation

As the discussion of completed activities indicates, product development objectives were largely but not completely met. Three of the four proposed products were completed, though the first product required a no cost time extension for completion. A spin off of the outreach project, the development of a more comprehensive and finished product for distribution by the state Department of Health, more than compensates in achieving the intended impact.

2) Impact Evaluation

Products developed during the year of outreach funding have been distributed and utilized as proposed. Approximately 200 copies of the parent guide "Developmental Steps" have been distributed, resulting in requests for additional copies, and other audiovisual materials have been utilized by 10 NICU's in the state, with an estimated total audience of 300.

In addition, the spin-off product will be distributed by the Health Department for use with parents in the 20 tertiary NICU's in California. This conservatively increases the potential impact to thousands of infants and families each year, out of the estimated 10,000 per year who are involved in newborn intensive care.

3) Resources Effectiveness Evaluation

Since NICU's handle large numbers of infants and with round the clock coverage, employ large numbers of staff, training poses significant resource problems. Our question was whether outreach products could serve in partial subsitution for direct training, particularly at Level I and II levels (see Objective 3). Evaluations of the training materials and videotapes of the Level I training course were very positive, both in terms of content and in terms of accessibility to those not receiving direct training. The videotapes of Level I training allowed many additional nurses who could not attend in person to complete the course.

Generally, for introductory and intermediate training levels, print and audiovisual materials were useful adjuncts and extensions to direct training approaches. It was difficult within project resources and a one year time frame to provide extensive direct training while developing print and audiovisual materials. As anticipated, these materials were useful for initial introduction and general developmental intervention guidance, but not for initiation of the individualized techniques which the ICN Interact Project espouses. This clearly required not only more intensive training but an allocation of an NICU staff persons time to fucntion in a developmental specialist/consultant role to the rest of the nursery staff.

Objective 5: To stimulate state involvement in new and improved services for high risk/handicapped newborns through:

1) development of a regional and statewide infant network
2) State level advisory board participation
3) California First Chance Consortium activities
4) impact on policy formation in the California Departments of Education, Health and Welfare and Development Services
5) participation in legislative study and planning for improved services to high risk/handicapped newborns

In the past ten years California has had a tremendous expansion of programs and services for infants with special needs. A handful of early intervention programs has proliferated into several hundred, some of which specialize in certain types of disability or certain types of high risk factors in infancy. Several state agencies have become involved in attempting to meet the needs of this population.

The current status of services as a result is complex, fragmented, with major gaps in services and duplication and overlap in other areas. Funding is unstable and restrictive. What is available to a family depends on where they live.

In the last several years there has been increasing efforts from the field to implement a comprehensive planning and coordination process for infant services. Several committees and an initial effort at legislation started a statewide advocacy effort. Several key outreach activities were proposed to assist progress toward a comprehensive service delivery system.

Activities Completed

1) Development of a regional and statewide infant network.

All activities were successfully completed as proposed. A major spinoff was the successful presentation of a multidisciplinary conference in May.

A) Regional Network

The Northern California infant network was active during the year on behalf of improved services to high risk/handicapped infants and their families.

Quarterly Meetings: Four quarterly meetings were held in which northern California infant program administrators, state agency personnel and other advocates discussed policy, quality standards and funding issues. A particular focus in these meetings was interagency communication so that issues common to infants in different service delivery systems could be identified. These meetings also served as a vehicle for communication from and input from the field to state level advisory committees.

Regional Directory: The directory of infant services in northern California was distributed to all infant programs and many other key agencies including hospital NICU's, regional centers for the Department of Developmental Services, and county offices for California Children's Services.

Job Bank: An active job bank was maintained to link qualified personnel with infant programs with positions available. A number of successful referrals were made.

Information Groups: The project director assisted with organization and information for three specific study or special interest groups concerned with infant services:

1) the West Bay Infant Network, which conducts quarterly meetings and inservice training for providers of services to developmentally disabled/handicapped infants from several Bay Area counties.

2) the Bay Area High Risk Infant Follow-Up Group, which links NICU neonatal follow-up programs from the major Bay Area hospitals through monthly meetings.

3) the Bay Area Clinical Infant Network, a new network which links six programs serving infants at psychosocial risk.

4) project staff have participated also in a new planning group, the East Bay Perinatal Council. Under California's Perinatal Regionalization Plan, this body brings together perinatal service providers in the two county area. An important role of project staff in this group has been to emphasize the need for better coordination of pernatal and delivery service systems with post-natal services for infants and families.

Conference: Although not originally proposed, a major conference for the northern California area was successfully planned and accomplished in response to a severe lack of inservice training opportunities for professionals in northern California. The conference was sponsored jointly by the Infant Development Association and the Early Childhood Special Education Program at San Francisco State University. A brochure and evaluation summary are included in the Appendix. The conference emphasized a multidisciplinary perspective on the continuum of needs of high risk and handicapped infants. Well known researchers, administrators and key state agency personnel gave willingly of their time to produce a professional conference at very low cost. More than 250 people from a variety of disciplines attended the conference. It was evaluated very positively by participants and presenters.

Statewide Network

Organization: As proposed, the northern California and southern California infant networks were joined together in a statewide network under the name of the Infant Development Association. Steering committees were established in the north and south. A common set of goals was accepted which included improving infant services, education, statewide information and referral, coordination with other agencies and policy/legislative input. As the only statewide organization concerned specifically with services to infants with special needs, IDA's input was sought frequently during the year by decision makers and advisory committees.

Position Statement: through a process of input and review from service providers around the state, a position paper was developed which summarized existing services, quality standards and unmet needs for handicapped/high risk infants and their families in California. Though the entire monograph cannot

be included in this report, a one-page summary of its recommendations has been included in the Appendix. The position paper was distributed to infant programs, relevant agencies, legislators and other key decision makers. It is used frequently as a reference in policy discussions.

Statewide Directory: Regional directories for northern and southern California were combined, updated and prepared for printing in a loose-leaf binder format. Distribution is projected for October-November, 1985. Several hundred infant programs are described by region in the directory.

Newsletter: The Infant Development Association distributes a quarterly newsletter which includes a comprehensive calendar of regional, state and national events; legislative updates; current publications; and reviews of issues and policies pertaining to infant services. Contributions from northern California are included regularly.

2) State level advisory board participation

As proposed the project director participated in several state advisory committees concerned with services to infants with special needs. These include:

A) State Implementation Grant Advisory Committee

The project director has been a member of the SIG Advisory Committee since its inception. A particular emphasis of SIG functions during the project year was planning then legislation to create a comprehensive statewide service delivery system for infants. As a SIG Advisory Committee member the project director addressed a variety of professional groups in support of improved services for infants.

B) Ad Hoc Committee on Early Intervention

A prior unsuccessful effort toward legislation mandating services for infants resulted in a legislatively established advisory committee which was to report to the Governor and legislature within one year. This committee, the Ad Hoc Committee on Early Intervention, was comprised of eight members of five other advisory committees which encompassed some aspect of services to infants with special needs. The project director participated in the committee as an alternate representative for the SIG Advisory Committee. This committee, after public testimony, prepared a comprehensive report on services to infants. The recommendations of this committee were incorporated into a new legislative bill to create an interagency service delivery system.

C) Office of Prevention Task Force

Recent legislative efforts created an Office of Prevention in the Department of Developmental Services. The Office of Prevention was given responsibility for many facets of prevention od developmental disabilities, including services to high risk infants and services to parents at high risk of developmental disabilities.

Input was provided as sought by the Office of Prevention Task Force, particularly in regard to service delivery systems for high risk infants and the need for interagency coordination. Eligibility criteria for high risk infants were reviewed and the need for comprehensive services to certain populations of high risk infants was supported.

3) California First Chance Consortium Activities

The California First Chance Consortium began as a network of California HCEEP projects which expanded its membership in recent years to include other groups. It links advocates of improved services to preschool age children with special needs. The Consortium has achieved several significant advances in recent years, including the initiation of California's SIG grant and the publication, through the Department of Education, of guidelines of preschool programs.

As a participant in the Consortium active efforts were understaken to support proposed legislation establishing a comprehensive service delivery system, and to maintain the Infant Preschool Special Education Resource Network of the Department of Education.

4) Impact on policy formation in relevant state departments

Through individual and organizational activities project staff, and particularly the project director worked to have a positive impact on policies affecting services to infants. Input was provided to each department through position papers, letters, meetings, public hearings and in the case of the Office of Prevention, Department of Developmental Services, invited testimony. Project staff also sought to inform relevant advisory committees, such as the Special Education Commission and the Maternal Adolescent and Child Health Boards which might in turn influence policy making in the affiliated department.

Much of the communication occurred in the context of developing and supporting legislation to create a comprehensive service delivery system in California. The major points emphasized in these communications were:

1) unmet needs of the infant population and the cost effectiveness (human and fiscal) of early intervention services.

2) the need for a continuum of individualized services for high risk as well as handicapped infants.

3) the need for quality standards in services and professional qualifications.

4) the need in California for interdepartmental cooperation and involvement in early intervention services for infants with special needs and their families.

5) Participation in legislative study and planning for improved services

This proved to be a key activity for the year. The project director participated in the drafting of the legislation, and in efforts to inform and encourage support from many key audiences for the bill once drafted. She provided testimony in several legislative hearings and assisted concerned parents in providing input. The Infant Development Association provided a communication link regarding the legislation, providing input to those drafting the bill and giving feedback to the field about issues and activities in the legislative process.

A number of significant issues arose in the planning process which demanded, and continue to demand, careful analysis. Which state agency should have responsibility? Which high risk infants should be eligible for services, and what types

of services do they need? Since services and needs vary greatly by geographical area, how can a local planning process be developed? What minimum standards are needed? How can an identification and intake system by developed which is easily accessible to the family, provides services quickly, and does not subject the family to multiple and fragmented interventions? These and other complex questions had to be approached within the context of California's large and diverse population and existing service system fragments.

1) Process Evaluation Evalution

As the preceding process evaluation documents, all proposed and several unanticipated activities, such as the conference, were achieved during the project year. Stimulation of state level involvement was a very active and productive area of project operations.

2) Impact Evaluation

The impact of these activities can be summarized as follows:

1) legislation which included creation of a comprehensive interagency service delivery system for infants with special needs was modified significantly but was passed by both houses of the California legislatures. The bill was vetoed by the governor, apparently not in objection to the infant portion but to the overall special education funding legislation of which services to infants was a component. The bill's author has indicated that he will introduce a separate bill dealing with infants only in the next session. Bipartisan legislative support for services for infants has been greater than anticipated.

2) the first comprehensive report and recommendations regarding services to infants with special needs was completed by the Ad Hoc Committee on Early Intervention. The report was prepared for the Governor and legislature. A closer working relationship among key state agencies involved with the infant population was a particularly significant achievement of the Ad Hoc Committee's efforts.

3) specific to the stated objectives of this proposal is that high risk infants were and continue to be included in legislation and recommendations. Although the Ad Hoc Committee was mandated to address the needs of handicapped needs it accepted the concept of a continuum of needs and services including high risk infants. It has been the position of project staff that high risk infants need services and that separate state departments for disabled, medically at risk and psychosocially at risk infants are inappropriate for the infant population. Coordination of resources at the state and local level is essential.

4) the Office of Prevention, Department of Developmental Services has prepared a comprehensive prevention plan which includes early intervention for developmentally disabled and high risk infants working closely with the Maternal and Child Health Branch of the Department of Health Services, the Office has developed an approach which beings prenatally for high risk parents and continues into infancy. Project staff have emphasized the need for better integration of perinatal health services with postnatal intervention services.

5) Project staff have worked toward the acceptance of common eligibility criteria for high risk infants. These criteria have been accepted by Maternal and Child Health and appear close to acceptance by the Department of Developmental Services. Currently many of the very high risk infants requiring significant periods of tertiary Neonatal Intensive Care may be excluded from services other than limited developmental follow-up in the first year, depending on where they live.

6) The need for improved services for infants has been communicated to legislators, state agency personnel, advisory committees and decision makers. There is a clear and significant increase in the general level of awareness of this group.

7) Professional communication has been improved through networking. This has resulted in greater sharing of information, referrals, identification of best practises, and effective advocacy for improved services for infants statewide. The statewide IDA network now includes approximately 500 professionals working with infants with special needs.

8) Professional education has been provided through conferences as well as through more specific conference presentations, training programs, training materials and papers.

In summary, though a comprehensive service system for infants is not yet in place in California, and indeed will take several more years to achieve, significant progress has been made during the past year. There is growing consensus about the needs of this population and methods for meeting those needs. Awareness of this population by legislators and key decision makers is increasing. Field and state agency personnel are working together more productively toward common goals. It now seems likely that a comprehensive service delivery system can become a reality in the near future.

APPENDIX

SPONSORS

INFANT DEVELOPMENT ASSOCIATION is a multidisciplinary organization of people in California committed to providing comprehensive services to handicapped and at-risk children (birth to three) and their families. The organization provides educational opportunities for its members and initiates and participates in advocacy activities that enhance services and promote greater understanding of the needs of this population.

SAN FRANCISCO STATE UNIVERSITY provides specialization at the Master's level in Early Childhood/Special Education. The University and Department also sponsor two early intervention programs in San Francisco: the San Francsico Infant Program, and Integrated Special Infant Services.

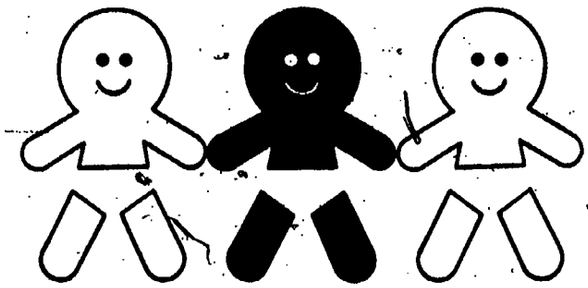
CO-SPONSORS

INTERACT is a national organization of early intervention professionals which advocates for continuous and comprehensive services for young handicapped children, beginning at birth, and their families.

INFANT-PRESCHOOL SERN (Special Education Resource Network) provides in-service training and resource assistance to programs serving infants and preschoolers with exceptional needs and their families throughout California.

THE SPECTRUM OF SPECIAL DEVELOPMENTAL NEEDS IN INFANCY

A MULTIDISCIPLINARY PERSPECTIVE



MAY 4-5, 1984
SAN FRANCISCO, CALIFORNIA

SPONSORED BY
INFANT DEVELOPMENT ASSOCIATION
AND
SAN FRANCISCO STATE UNIVERSITY

Infant Development Association
c/o Nancy Sweet, EdD
Children's Hospital Medical Center
51st and Grove Streets
Oakland, Ca. 94609

REGISTRATION INFORMATION

DATE/PLACE/TIME

- Friday, May 4, 6-10 pm and
  Saturday, May 5, 8 am - 6 pm
- Seven Hills Conference Center
  San Francisco State University
  San Francisco, California

REGISTRATION

- Registration will be limited. Pre-registration is advised in order to obtain first choices in sessions.
- Preregistration fee is $35.00. Registration fee after April 20 is $40.00. Fee includes Friday evening hosted wine and cheese reception, Saturday lunch, and a years membership in the Infant Development Association.
- Registration fee at the door (May 4 or 5) is $40.00.
- Cancellations: Registration fee will be returned in full prior to April 20. No refund after April 20.
- Information on hotel/motel accommodations and public transportation is available. A hospitality program will arrange for out-of-town participants to stay with local participants Friday night.
- Make check/money orders payable to Infant Development Association.
- Mail registration form to:
  Infant Conference
  c/o Peggy Regalado
  El Portal School
  San Mateo Co. Office of Education
  1280 Commodore Dr., West
  San Bruno, Ca. 94066

AL NEEDS: a multidisciplinary perspective

IDA/SFSU Spring Conference

Friday, May 4

6:00 - 7:00 pm	REGISTRATION
7:00 pm	OPENING REMARKS: NANCY SWEET, Co-Chair, Infant Development Association and Director of Early Intervention Programs, Child Development Center, Children's Hospital Medical Center, Oakland.
7:15 pm	WELCOME: WILLIAM WILSON, Ph.D., Chair, Department of Special Education San Francisco State University.
7:30 pm	THE FUTURE OF SERVICES TO INFANTS IN CALIFORNIA: HOPE, PLANS AND POLITICS: JACK HAILEY, Executive Secretary, Child Development Programs Advisory Committee.
8:00 pm	THE NATIONAL PERSPECTIVE ON SERVICES TO INFANTS: GENEVA WOODRUFF, Ph.D Chair, INTERACT and Director, Project Optimus, Boston, Mass.
8:15 pm	PRETERM INFANTS AND THEIR FAMILIES: PETER GORSKI, M.D., Director of Developmental and Behavior Pediatrics, Mt. Zion Hospital and Medical Center, San Francisco.
9:15 pm	RECEPTION (wine and cheese) for conference presenters and participants.

Saturday, May 5

8:15 - 9:00 am	REGISTRATION
9:00 am	OPENING REMARKS
9:15 am	WELCOME: HENRIETTA SCHWARTZ, Ph.D., Dean School of Education, San Francisco State University.
9:30	THE SHAPING INFLUENCES OF THE EARLY INFANT-PARENT RELATIONSHIPS: JEREE PAWL, Ph.D., Associate Clinical Professor, Department of Psychiatry, UCSF Medical Center and Acting Director Infant-Parent Program, San Francisco General Hospital.

BREAK (15 min.)

LARGE GROUP SESSIONS (10:45-12:15)

I. TODAYS INFANT WITH SPECIAL NEEDS: OBSERVATIONS OF TRENDS IN EARLY IDENTIFICATION: LUCY S. CRAIN, M.D., Associate Clinical Professor of Pediatrics and Director, Disabilities Clinic, UCSF Medical Center and SALLY SEHRING, M.D., Director, Newborn ICU Follow-Up Clinic, Children's Hospital, San Francisco.

II. PROFESSIONAL/PARENTAL RELATIONSHIPS: A TRAINING PROGRAM ON DEVELOPMENTAL DISABILITIES FOR HEALTH AND ALLIED PROFESSIONS: VIP Project, SHARI L. DURON, L.C.S.W., JOHANNA WILLEMSEN, P.H.N, and parent panel, Poplar Center, San Mateo.

III. FAMILIES IN STRESS: IDENTIFICATION AND INTERVENTION: HOWARD GILLIS, Ph.D., Clinical Psychologist, Child Study Unit, UCSF Medical Center and MARY KRENTZ, Ph.D., Clinical Psychologist and Assistant Director, Integrated Special Infant Services, San Francisco State University.

IV. DEVELOPMENTAL PERSPECTIVES ON ASSESSING INFANTS WITH SPECIAL NEEDS: GORDON ULREY, Ph.D., Clinical Assistant Professor of Psychiatry and Pediatrics, U.C. Davis Medical Center.

LUNCH (12:15-1:15)

SMALL GROUP SESSION I (1:15-2:15)

REGISTRATION FORM

(please print)

Name: _____

Address: _____

City,Zip: _____

Daytime phone #: ( ) _____

Enclosed is my check/money order, made payable to the Infant Development Association, for $_____ for the 1984 IDA/SFSU Spring Conference. Fee includes Friday evening reception, Saturday lunch and membership in IDA.

Conference Selections

Large Group Sessions: (indicate 1st, 2nd 3rd choices)

I _____ II _____ III _____ IV _____

Small Group Sessions I: (indicate 1st, 2nd, 3rd choices)

A _____ B _____ C _____ D _____

E _____ F _____ G _____ H _____

Small Group Session II: (indicate 1st, 2nd, 3rd choices)

1 _____ 2 _____ 3 _____ 4 _____

5 _____ 6 _____ 7 _____ 8 _____

Please check if you want information:

____ hotel/motel accommodations

____ accommodations with local family

____ public transportation

____ CEU credit (1 CEU credit available)

Tear off and mail to:

Infant Conference, c/o Peggy Regalado
El Portal School
San Mateo Co. Office of Education
1280 Commodore Dr., West
San Bruno, Ca. 94066

THE SPECTRUM OF SPECIAL DEVELOPMENT

A. THE NEEDS OF SIBLINGS OF DISABLED CHILDREN: ANN CARR, M.S., Training Specialist, M.O.R.E. Project, Family Service Agency, San Francisco and BARBARA GROSSMAN, M.A., Counseling Intern, ARC-Fresno, Exceptional Parents Unlimited.

B. EFFECTS OF PARENTAL STRESS ON PSYCHOLOGICAL AND SOMATIC DEVELOPMENT IN INFANTS: FRANCES KNUDTSON, Ph.D., and Joanne Figone, O.T.R., Agency for Infant Development, Marin.

C. PREMATURITY: CAUSES, CONDITIONS AND CURES: ANN KOSITSKY-HAIMAN, R.N., M.S.

D. AUDITORY PROBLEMS IN INFANCY: IDENTIFICATION AND TREATMENT: ADELINE McCLATCHIE, L.C.S.T., Dip. Aud., Coordinator, Audiological Services, Center for Children's Communication Disorders, Children's Hospital Medical Center, Oakland.

E. WHAT IF THE PARENT IS DEVELOPMENTALLY DISABLED: DIANE NANIS, Director, Project P.A.L.S., Community Association for the Retarded, Palo Alto.

F. THE TRANSDISCIPLINARY SERVICE DELIVERY MODEL: A TEAM APPROACH: GENEVA WOODRUFF, Ph.D., Chair, INTERACT and Director, Project Optimus, Boston, Mass.

G. EARLY IDENTIFICATION OF INFANTILE AUTISM: ADRIANA L. SCHULER, Ph.D., Associate Professor of Special Education, San Francisco State University.

H. VISUAL PROBLEMS IN INFANCY: IDENTIFICATION AND TREATMENT: CHARLENE HSU, M.D., Pediatric Ophthalmologist, Kaiser Permanente Medical Center, So. San Francisco and Assistant Clinical Professor of Ophthalmology, UCSF Medical Center.

BREAK (15 min.)

SMALL GROUP SESSION II (2:30-3:30)

1. A CLOSER LOOK AT COMMUNICATION BETWEEN ATYPICAL INFANTS AND THEIR PARENTS: MARGOT ARANA, M.A., C.C.C., Speech and Language Pathologist, Children's Health Council, Palo Alto.

2. INTERVENTION METHODS WITH VISUALLY IMPAIRED INFANTS: DENISE COOK-CLAMPERT, M.A., Director, Easter Seal Infant Development Program, San Francisco.

3. ADVOCACY: LEGAL, POLITICAL AND PARENTAL PERSPECTIVES: JOSEPH FELDMAN, Director, Community Alliance on Special Education, San Francisco and LINDA WURZBACH, Parent Specialist, SERN 5.

4. A SENSORIMOTOR APPROACH TO DEVELOPMENTAL DELAY: JANET GREEN, M.S., R.P.T., Physical Therapist, East Seal Infant Development Program, San Francisco.

5. NEUROBEHAVIORAL MATURITY ASSESSMENT OF PRETERM INFANTS - A NEW APPROACH: ANNELIESE KORNER, Ph.D., Professor of Psychiatry and Behavioral Sciences Research, Stanford University School of Medicine.

6. THE SPECIAL NEEDS OF THE MEDICALLY DISABLED INFANT: TRUDY LATZKO, R.N., M.A., Program Director, Developmental Services Department, Family Service Agency, San Francisco and ELLEN SINGER, M.A., International Child Resources Institute, Berkeley.

7. THE PSYCHODYNAMICS OF PARENT SUPPORT GROUPS: ELIZABETH H. MAURY, Ph.D., Co-Coordinator Exceptional Parents Unlimited, Fresno and Assistant Clinical Professor of Medical Psychology, UCSF Medical Center.

8. INTERVENTION WITH INFANTS WITH AUDITORY IMPAIRMENTS: JAMES STAHLECKER, Ph.D., Research Psychologist, Center on Deafness, UCSF Medical Center.

BREAK (15 min.)

3:45 - 4:15 pm FUTURE DIRECTIONS FOR EARLY INTERVENTION PROGRAMS: MARCI HANSON, Ph.D., Associate Professor of Special Education and Director of Early Intervention Programs, San Francisco State University.

4:15 - 4:30 pm CLOSING REMARKS AND CONFERENCE EVALUATION

IDA/SFSU Spring Conference, 1984

THE SPECTRUM OF SPECIAL DEVELOPMENTAL NEEDS IN INFANCY:

A MULTIDISCIPLINARY PERSPECTIVE

PURPOSE

The purpose of the conference is to update professionals working with developmentally disabled, medically at-risk and environmentally at-risk infants and their families on current issues and approaches in the field. Presenters and presentations are geared to a multidisciplinary audience. The conference will draw together some of our excellent resources in northern California in research, prevention, early intervention and advocacy.

DATES AND TIMES

Friday, May 4, 6-10 pm and Saturday, May 5, 9-5 pm.

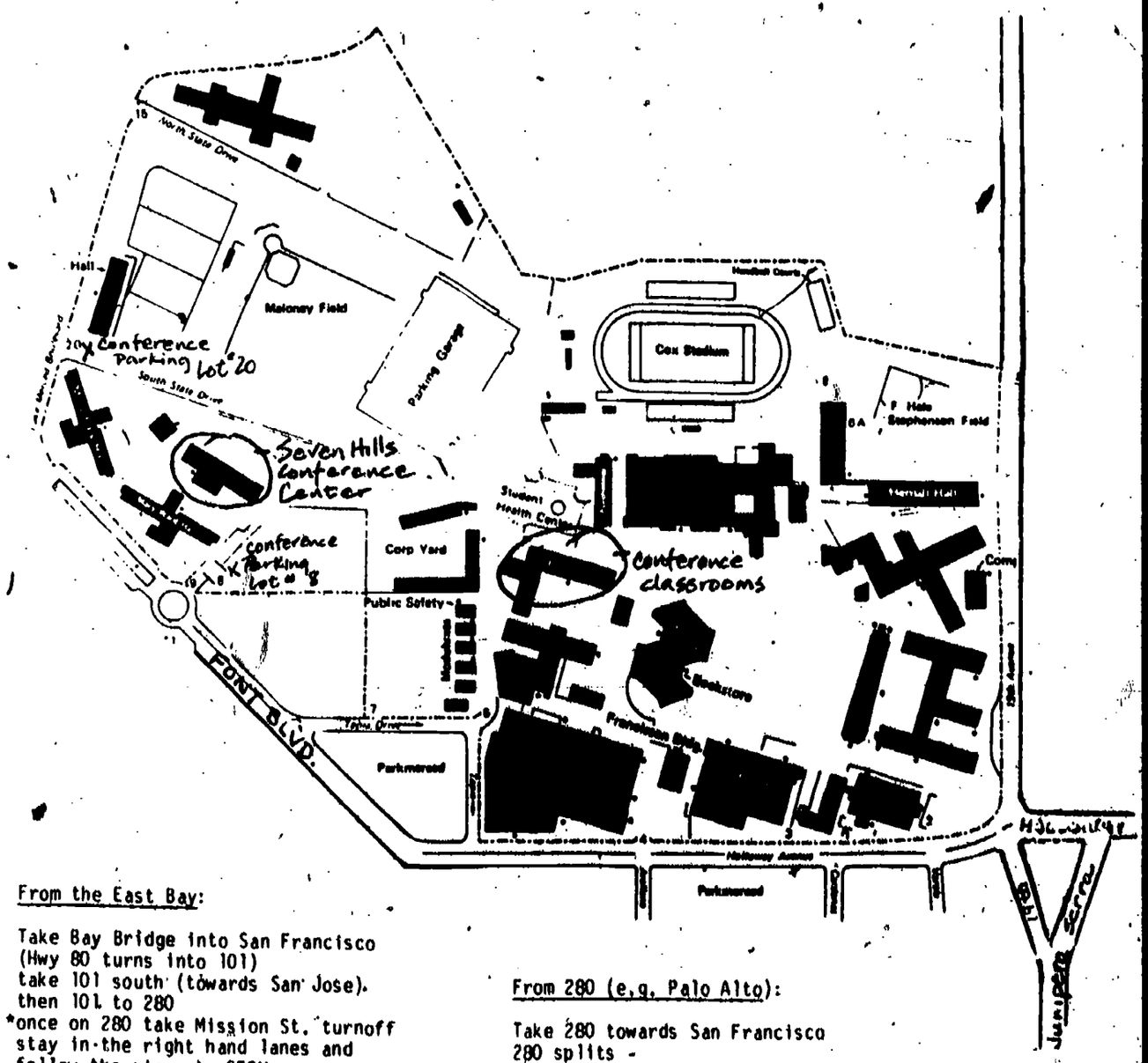
COST

Preregistration fee is $35.00. The cost for registrations received after April 20 is $40.00. Conference fee includes a hosted wine and cheese reception Friday evening, lunch on Saturday, and a years membership in the Infant Development Association.

LOCATION

The conference will be held at the new Seven Hills Conference Center in Mary Ward Hall at San Francisco State University. Classrooms in the Education Building will be used for small group sessions. Parking is available adjacent to Mary Ward Hall. Public transportation is also available.

DIRECTIONS TO SAN FRANCISCO STATE UNIVERSITY



From the East Bay:

Take Bay Bridge into San Francisco
(Hwy 80 turns into 101)
take 101 south (towards San Jose).
then 101 to 280
*once on 280 take Mission St. turnoff
stay in the right hand lanes and
follow the signs to SFSU

From the Peninsula:

Take 101 north (towards San Francisco)
to 280
then *East Bay directions

From 280 (e.g. Palo Alto):

Take 280 towards San Francisco
280 splits -
bear to your left towards the
19th Ave./Hwy. 1 turnoff
280 ends and turns into Junipera Serra Blvd.
Junipera Serra then splits -
stay to your right! - do not take 19th Ave.!
proceed on Junipero Serra to Holloway
left on Holloway
take Holloway to Font

CONFERENCE EVALUATION SUMMARY

The Spectrum of Special Developmental Needs in Infancy: A Multidisciplinary

A Multidisciplinary Perspective

May 4 - 5, 1984 San Francisco, California

Sponsored by: Infant Development Association
San Francisco State University

The following information is based on 145 evaluation forms.

Professional roles of participants

23 Directors/Coordinators
8 Physical Therapists
13 ~~12~~ Social Workers
40 ~~39~~ Special Educators (Infant Specialist)
12 ~~11~~ Occupational Therapists
1 Pediatrician
9 Speech/Language Therapists
22 ~~21~~ Nurses
3 Parents
~~1~~ Peer Counselor
1 Consultant
1 Parent Trainer
1 Therapist
1 Paraprofessional
1 Counselor
3 School Psychologists
4 Researchers
3 Students
2 Nurse Practitioners

Participants serve children with:

36 ~~35~~ Medical/biological problems
47 specific disabling conditions
9 ~~8~~ problems relating to environmental risk factors
55 ~~52~~ all of the above
1 normal children
1 hearing impairments
2 twins
2 learning disabilities
2 abused
1 visual impairments
1 parents

Overall strengths (comments made more than two times)

qualifty of speakers
walk between buildings
facilities
wine and food
nice tone/atmosphere
low cost
organization
variety of topics
use of visual aids
opportunities to interact with other professionals
all speakers at Seven Hills Center (Gorski, Pawl, Hailey, Hanson)

Overall weaknesses (comments made more than two times)

not getting first choice of sessions
few restrooms in conference center
small video monitors
too short in total length
lunch time too short
needed more time per session
needed more practical information
directions/map
speakers too basic/simplistic
no telephones in conference center

Suggestions

brochures should more fully describe each session's content
do it again!!!
have panel discussions
tape sessions and have tapes available for later viewing
invite regular education teachers
put a phone number on the brochure
longer lunch time
topic suggestions:
- politics
- interagency cooperation
- computers
- cultural differences
- failure-to-thrive infants
- sensory integration
- rural service delivery models
- specific disability areas

LARGE GROUP SESSIONS

Session	Number of forms	Average Score *	Comments
I. Trends in Early Identification - Crain/Sehring	35	4. 17	excellent session (6) needed more time (5) lots of information (1) wanted handouts (3)
II. Professional/Parental Relationships- Duron/Willemsen	16	4.25	good session (4) enjoyed parents (6) good filmstrip (1)
III. Families in Stress- Gillis/Krentz	41	4.16	good session (8) good tape (3) wanted more interaction (2) wanted discussion time (1) too basic (3)
IV. Developmental Perspectives on Assessing Infants - Ulrey	27	3.05	speaker late (10) too simplistic (3) not enough time (1) good session (6) good video (1)

* Rating Scale:

very successful — unsuccessful

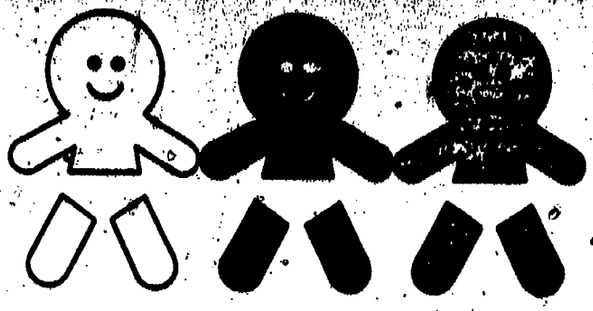
5 4 3 2 1

SMALL GROUP SESSION I

Session	Number of forms	Average Score*	Comments
a. The Needs of Sibs - Carr/Grossman	18	3.78	needed more time (3) good session (1)
b. Effects of Parental Stress... - Knudtson/Figone	20	4.00	needed more time (3) enjoyed video tapes (3) interesting (3)
c. Prematurity... - Kositsky-Haiman	11	3.36	good session (3) too basic (1)
d. Auditory Problems... - McClatchie	11	4.23	interesting (1) needed more time (1) good speaker (2)
e. Developmentally Disabled Parents - Nanis	7	3.07	wanted more information (2) wanted more about intervention (2)
f. Transcisciplinary Service Delivery Model - Woodruff	13	4.61	good session (2) needed more time (3) dynamic speaker (2)
g. Early Infantile Autism - Schuler	17	4.12	needed more time (4) good session (5) wanted more on 0 to 3 years
h. Visual Problems - Hsu	16	4.47	good session (6) needed more time (2) too cluttered (1)

SMALL GROUP SESSION II

Session	Number of forms	Average Score*	Comments
1. Closer Look at Communication - Arana	18	3.68	needed more time (4) good video (1) too slow (2) good session (2) too theoretical (1)
2. Visually Impaired-Cook-Clampbert	6	4.33	good audio visual (1) good speaker (2) good handouts (1)
3. Advocacy-Feldman/Wurzbach	1	3.00	
4. Sensorimotor Approach-Green	15	4.68	needed more time (4) good session (5)
5. Neurobehavioral Maturity Assessment - Korner	22	4.14	good session (3) needed more time (2) good videos (4) not useful (3)
6. Medically Disabled Infants - Latzko/Singer	13	3.46	good slides (1)
7. Psychodynamics of Parent Support Groups - Maury	25	4.12	needed more time (4) good session/helpful information (11)
8. Auditory Impairments - Stahlecker	9	3.44	informative (1) wanted more intervention information (4) excellent (2)



Infant Development Association

3750 Martin Luther King, Jr. Boulevard, Los Angeles, California 90008

PURPOSE-GOALS

The Infant Development Association is a multi-disciplinary organization of people in California committed to providing comprehensive services to handicapped and at-risk children (birth to three) and their families. The organization shall provide educational opportunities for its members and will initiate and participate in advocacy activities that will enhance services and promote greater understanding of the needs of this population.

The goals are:

1. To implement and maintain a communication and advocacy system for sharing information about services for very young children (birth to 3 years) with special needs, and their families.
2. To provide educational opportunities for its members by establishing study groups, sponsoring conferences, providing a newsletter and publishing the California Infant Development Program Directory.
3. To initiate and participate in all local, state and federal advocacy activities leading to continuous and comprehensive services for this population.
4. To inform and influence social service, allied health, medical and educational decision-makers about the importance of early intervention services for this population.
5. To review and initiate research studies on the importance and efficacy of early intervention and disseminate relevant materials.

For further information, contact: Fran Chasen, (213)290-2000 or Nancy Sweat, (415)655-9521

-tear off-

*CHECK TYPE OF MEMBERSHIP DESIRED

( )	Student/Parent	$ 5.00 Yearly
( )	Individual	$10.00 Yearly
( )	Agency	$15.00 Yearly

Name _____

Address _____

_____

Business Address _____

_____

_____

*All checks should be made payable to "Infant Development Association"
3750 Martin Luther King Jr. Blvd.
Los Angeles, CA 90008
% Meg Serden

PUBLICATIONS

California Infant Program Directory
$15.00 per copy (with binder) -- No. of copies _____
$13.00 per copy (insert only) -- No. of copies _____

Down Syndrome: Growing & Learning
$7.00 per copy -- No. of copies _____

Hope for the Families
$5.90 per copy(includes postage)-No. of copies _____

New Life in the Neighborhood
$6.90 per copy(includes postage)-No. of copies _____

Special area of interest? _____

_____

Home Phone _____ Business Phone _____

Phone Tree(yes, I am interested) _____

Study Group _____

RECOMMENDATIONS

1. A comprehensive coordinated state plan must be developed which establishes a local planning process for families with special needs infants birth to 3 years.

2. Appropriate infant development services for any child with special developmental needs must be made available in all areas of California.

3. Infant development programs need a stable and sufficient fiscal support base to sustain adequate staff and program quality.

4. Coordination of service delivery systems is needed to eliminate gaps in service and delays in entering service systems initially.

5. Quality standards need to be emphasized across all agencies providing services to infants.

6. A variety of program models need to be available to meet the needs of individual families.

7. Funding must permit services to infant and family, not just the infant.

8. Referral and eligibility processes need to be streamlined to minimize the delay in services.

9. Quality standards for staff composition and competencies should be developed.

10. State and local planning of services for infants with special needs must involve service providers and parents.

ACTIVITIES FOR NURSES TO PROMOTE DEVELOPMENT IN THE HIGH RISK INFANT IN A HOSPITAL ENVIRONMENT

BY,

ICN INTERACT PROJECT
CHILD DEVELOPMENT CENTER
CHILDREN'S HOSPITAL MEDICAL CENTER
OAKLAND, CALIFORNIA

INTRODUCTION

The developmental recommendations in this slide presentation include several environmental modifications and handling techniques as well as developmental activities to promote interaction between the premature and sick hospitalized infant and caregiver. Our goal is not to offer a packaged stimulation program, but to offer support to this fragile infant and to assist him toward neurophysiological integrity and organization. Each infant is different with a different threshold for stimulation. No activity should be suggested until each infant has been carefully and sensitively observed to determine his or her threshold for stimulation and range of responses. Infants should be continually observed to note how they are responding on all levels. If at any time an activity disturbs an infant or causes sudden changes in heart rate, respiration, color or muscle tone, it should be stopped and offered later or after recovery.

Recommendations are also suggested with special attention paid to infant states. A soothing routine of swaddling, prone positioning and pacifier may be suggested for the irritable infant rather than face to face play; a short 30 second experience with a visual stimulus of face alone <u>without</u> talking, may be appropriate for the briefly alert infant; and simply encouraging a parent to hold the infant close may be appropriate for the still sleepy baby who cannot yet muster an alert state.

HANDLING PROCEDURES FOR THE ACUTELY ILL INFANT:

Slide 1, 2:

Reduce noise: (1) To remind staff of baby's need for quiet a "Do Not Disturb" sign at bedside is useful. (2) Do not talk over bedside and avoid slamming porthole doors.

Slide 3, 4, 5, 6:

Reduce light: (3) Place blanket over table bed, (4) isolette or (5) crib to cut down on excessive light. (6) One suggestion is to use individual bedside light at each bedside.

Slide 7:

While taking vital signs: (7) Position infant in supine, holding his arms close to his body across his chest with your hand. This prevents flailing movements and startling. Do not leave infant on his back. If left in this position babies may have abnormal posturing later.

Slide 8, 9, 10, 11:

Positioning intubated infants: (8) Place in prone with blanket rolled up along each side of infant's body and one at feet with legs flexed. Keep area around bedside quiet and reduce light whenever possible. (9) Or, rotate to sidelying with rolls in place. (10,11) Avoid supine position with extended limbs and abducted hips.

Slide 12, 13:

Weighting infants: (12) Before carrying to and from scale, carefully contain limbs close to body to avoid flailing. (13) After replacement in bed, hold hands on limbs to let baby recover.

Slide 14:

During IV changes: (14) Position infant on side placing blanket rolls at feet with limbs flexed. Cover if possible and offer pacifier. To help infant tolerate this stress, another nurse can hold limbs in place and swaddle infant's body with her hand. After procedure is completed leave in position and soothe with soft voice. Let infant recover before changing position.

Slide 15:

Rest periods and breaks: (15) The very young intubated babies, (babies with BPD, and SGA infants) benefit from 15 minute breaks between procedures such as taking vital signs and diapering. Allowing 2-3 hours undisturbed rest after a series of medical procedures or caregiving is valuable.

Slide 16, 17:

Suctioning: (16) Before suctioning, position in sidelying with limbs flexed and held close to body. (17) After procedure, cover infant's body with your hand gently to "hold" and offer soothing voice. Let recover and calm before repositioning.

Slide 18, 19:

Restraints: (18) When restraining infants do not position infant with arms or legs spread out. Instead, bring together and flex limbs. Use soft wraps with velcro fasteners and elastic ties. (19) Position baby in sidelying with hands together at midline. Wraps should be placed around wrist with ties fastened to bedding to allow some freedom of movement. If possible position babies so hands can come to mouth to suck on fingers enabling some self-soothing.

Slide 20:

Soothing techniques: (20) To calm an irritable infant, we recommend the following hierarchy of techniques from no intervention to maximum. Work with infant to find which techniques are most effective and then have primary nurses offer the same techniques to provide consistency. It is best and most effective with an irritable infant to have as few nurses handle baby as possible providing as much consistency and familiarity of handling for baby as possible. Always observe infant for reactions to interventions as well as heart-rate, respiratory rate, color, etc.

Slide 21:

a. (21) Minimal handling: Position comfortably and leave untouched for as long as possible. Reduce light, noise, etc.

Slide 22:

b. (22) Prone positioning, swaddled with blanket rolls at sides and at feet. Reduce light, noise and handling.

Slide 23:

c. (23) Pat back while positioned in prone.

Slide 24:

d. (24) Offer face only, leaning over baby's face 8" away from visual field; no talking.

Slide 25:

e. (25) Offer voice only with no face - talk gently at sides.

Slide 26:

f. (26) Hand on belly restraining both arms on chest. Encourage infant to suck on his fingers.

Slide 27:

g. (27) Pick up and hold, rock and offer pacifier.

ACTIVITIES FOR THE EXTUBATED INFANT:

Slide 28:

<u>To facilitate suck</u>: While holding the preterm infant (35 weeks corrected age):

a. (28) Offer your little finger after dipping it in sterile water and gently, slowly stroke the roof of the baby's mouth with your fingertip. Common problems with infant suck may be:

   1. inconsistent suck which drops off and starts again;
   2. poorly coordinated suck, or
   3. nonexistent suck.

As long as infant is not fatiqued or stressed by procedure of offering wet finger, this may be practiced for 30 seconds to 1 minute 2-3 times a day to develop skill of sucking. The goal is to offer practice for the suck reflex.

Slide 29:

b. (29) Offer pacifier taped to bottle so infant may practice sucking when not being held.

Slide 30:

c. (30) Offer pacifier during gavage feedings to promote suck reflex during a feeding.

Slide 31, 32, 33:

<u>Positioning</u>: (31) Prone is most comfortable for babies. (32) Sidelying is next best - do not leave crying, irritable baby on his back. (33) While holding, baby's generally calm best while being held at the shoulder.

Slide 34:

(34) Rocking gently is soothing either while standing and holding infant at shoulder or sitting holding cradled. Experimenting with each baby may be necessary to find best position for caregiving. Be careful not to overstimulate.

Slide 35, 36, 37

<u>Turning infants</u>: (35) To turn from prone to supine gather legs under baby and (36) hold arms close to body rotating slowly. (37) Hold limbs until infant is repositioned.

<u>Visual activities</u>: For the baby who is showing alert states lasting longer than 2-3 mintues the following activites are offered with the caution to continually observe infant for signs of fatigue, ie. respiratory stress, color change etc. Sometimes these responses are delayed. If these signals appear, stop and give baby a rest.

Visual activities/con.

Slide 38:

a. (38) Face Alone: When holding the baby, present your face 8-10" away and encourage focus on your face only if he is alert and quiet.

Slide 39:

(39) If this is too much for the baby he may signal by turning away or closing his eyes. Respect this action. Approach slowly allowing infant to take the lead. After the infant has shown you that he can focus on your face move it (40) slowly side to side then up and down very slowly. Always take your cues from the baby. (41, 42) If he is not ready he may become very tired. This is a signal from the baby to take a break.

Slide 40, 41, 42:

Slide 43:

b. (43) Face and Voice: After good attention is achieved, offer voice with face. Practice observing infant responses to your face and voice together. Some babies need them offered slowly in succession one at a time until they can tolerate both.

Slide 44:

(44) When infant can focus attention to both face and voice offer a game of following your face as you talk and smile side to side and up and down in a circle.

Slide 45:

(45) Some babies become stressed by too much play and become hyperalert. This baby needs a break as he is overstimulated.

Slide 46:

c. (46) In isolette or crib: If infant is having 3-5 minute alert periods place a simple picture 8-10" from infant's eyes low enough to be in line with his eyes.

Slide 47, 48:

(47) A small bright birthday paper plate or a red yarn ball 8" from eye are good items. (48) Rotate all visual objects (no more than 2 at a time in isolette) once a day. Red, black and white designs are particularly interesting to babies.

Slide 49, 50:

Auditory activities: (49) The preterm baby can tolerate quiet, slow talking, humming or singing especially during alert times. If the baby arouses and brightens to your voice, he is responding to it. (50) If he turns away, closes his eyes or grimaces, he may be irritated by the voice or sound and you should stop.

Some babies can only handle one mode of stimuli at a time. If you are holding the baby, just holding may be enough. To add your face and voice may be too overwhelming.

Slide 51:

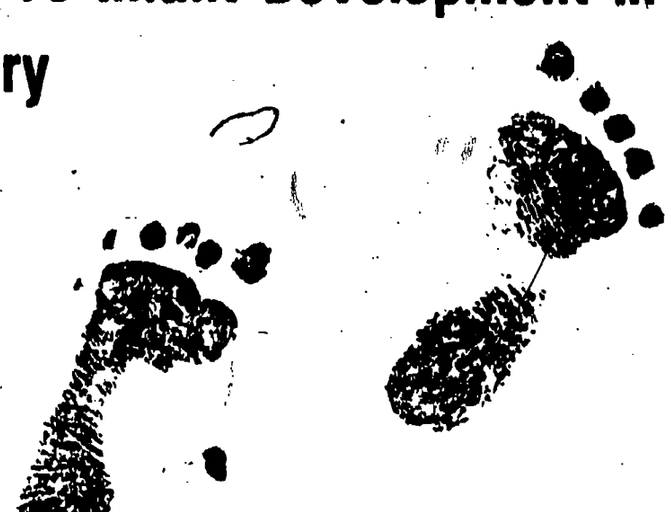
(51) After 35 weeks if a baby is not showing startles or grimaces or aversion to sounds a quiet music box (the kind in soft stuffed animals) can be placed in the crib for him during his alert or quiet times. If a baby is continually stressed by noises try to relocate his crib to a quiet corner away from phones and loud speaker systems. Never play radios in the unit.

Slide 52, 53:

Infant seats: (52,53) An infant may be propped in an infant seat when he has reached 2 weeks corrected age (that is, 2 weeks after his due date). An infant seat should only be used during alert periods. Preterm infants should not sleep in them.

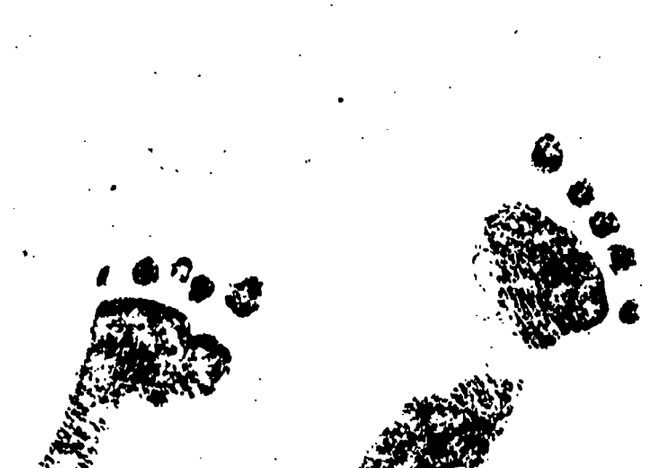
DEVELOPMENTAL STEPS:

A Guide For Parents To Infant Development In The Intensive Care Nursery



by

Bette L. Flushman, M.A. and Kathleen A. VandenBerg, M.A.



Illustrated by,
Janet Young and Pam Aubin

Edited by,
Nancy Sweet and Diane M. Lazzari

U.S. Department of Health, Education and Welfare
Office of Education

DEVELOPMENTAL STEPS:

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ICN Interact Project
Child Development Center
Children's Hospital Medical Center
Oakland, California
June, 1984

The activity which is the subject of this report was produced under a grant from the U.S. Department of Health, Education and Welfare, Office of Education, under the auspices of the Handicapped Children's Early Education Program. However, the opinions expressed herein do not necessarily reflect the position or policy of the Office of Education, and no official endorsement by the Office of Education should be inferred.

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INTRODUCTION

As a parent who has a baby in the Intensive Care Nursery (ICN), you have been faced with an unusual and difficult experience. You have worried over your infant's life, health and perhaps his condition in the future.

The ICN is essential to the best outcome for your baby, yet it can be a stressful place for parents. A large number of medical staff and a bewildering set of machines and technical procedures may be necessary to help your baby survive and grow.

Moreover, it may be difficult to identify with your infant when you may not understand all that is happening to him. It is a dilemma when you want to care for your baby and love him, but must relinquish your role to a nurse whom you do not know.

As specialists in infant behavior and development we know that, even for the very sick and very premature baby in the ICN, the parent has a very special role beginning the first day. Both research and experience show us that there are things which only you, as parents, can do for your infant that will make a difference now and in the future.

We believe that the relationship between parent and baby is the most important influence in fostering the baby's development. This is particularly true for the baby who must begin life in the Intensive Care Nursery. By learning to understand your baby's behavior and developmental needs you will begin to acquire the necessary information to help develop his mental and physical abilities.

During the hospital stay parents often ask questions, such as, "How much can I hold my baby?","Does touching hurt him?", "Is a music box appropriate?". As discharge approaches other questions and concerns arise, such as, "How will he react to going home?", "What kinds of toys does he need?", "Is he ready for normal baby play?".

The purpose of this manual is to answer these questions and to offer you, the parent, help in understanding and guiding your baby's development. It provides activities to begin with your infant in the ICN, to continue during his hospitalization and to use later at home. These activities are designed with his emerging abilities in mind; when he is the most sick and needs adjustments to his environment, through the time when he is recoving and is ready for more active stimulation.

These activities are planned to help you:

1. Build your confidence in your ability to handle and care for your baby.
2. Develop a reasonable expectation for your baby's ability at each stage of development.
3. Learn what you can do to encourage your baby's development while he is in the ICN and when he is home.

Since most babies in the ICN are prematurely born we devote special attention to them. Chapter I describes three general phases:

1. THE ACUTELY ILL PHASE: The first weeks of life for the very premature or seriously ill baby when the most specialized care, such as the respirator, is needed.

2. THE SPECIAL CARE PHASE: The baby is stable but still requires special care, such as, an isolette or hood oxygen.

3. THE CONVALESCENT PHASE: The baby in a bassinette or crib, possibly in room air, learning to feed and gaining weight.

Chapter II deals with the specific developmental needs of the babies who have had other health and physical conditions, such as, surgery, chronic lung disease or low birth weight. Chapter III discusses the transition from hospital to home during the first anxious but exciting weeks when new questions and concerns arise. Chapter IV provides references for parents concerning infant development.

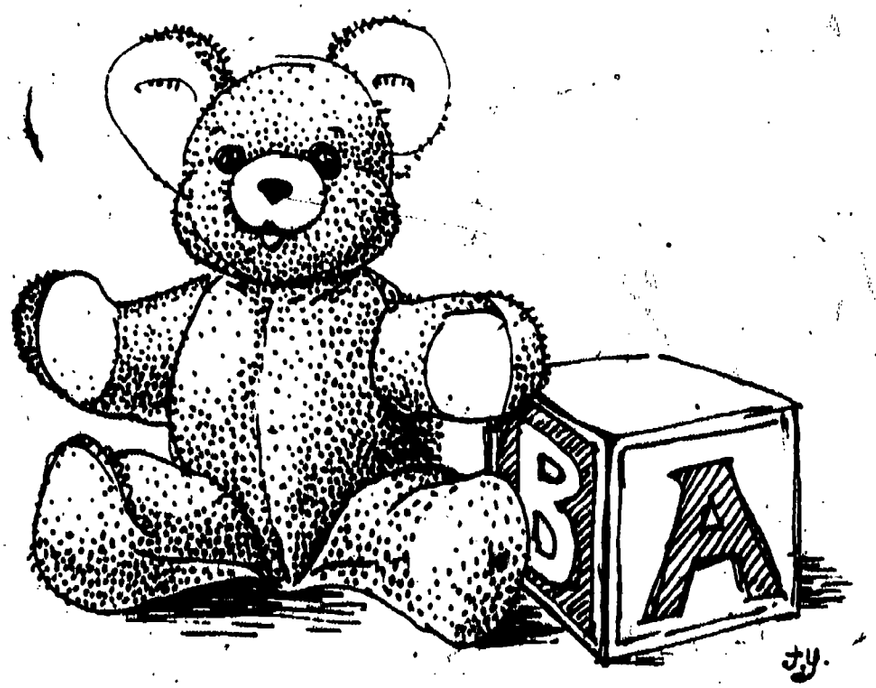
To use this guide parents of babies who are born several weeks premature should begin by reading the Acutely Ill Phase. Parents of babies born only a few weeks premature, who are medically stable, should begin by reading the Special Care Phase. Parents of babies with special needs should read the sections in Chapter I as well as in Chapter II.

We hope this guide will help you realize that your role as parent is of vital importance to your infant's growth and development. By taking these developmental steps you can begin to build a foundation that will carry both of you through this difficult time and into the early years when his mental and physical skills will unfold. Without you he cannot accomplish these tasks toward development.

CHAPTER 1

THE PREMATURE BABY IN THE INTENSIVE CARE NURSERY

THE PREMATURE BABY: THE ACUTELY ILL PHASE



THE ACUTELY ILL BABY - WHAT BABY IS LIKE...

The baby who is acutely ill is one who has been born premature or very small or both. Because of these two factors the systems of his body are immature and not ready to function. Therefore, he may be on a respirator which breathes for him, have numerous tubes and a variety of continuing medical treatments. He is usually placed on an open table bed so that the medical staff may carefully observe him. He may be immobilized by medications. Nevertheless, he can still be aware of your presence through voice and touch. Although he will spend almost all of his time asleep, he can still move, feel and experience waking periods. You may see him bend and stretch his arms and legs; his fingers can close tightly in a grasp or spread wide apart. He may try to put his hand to his mouth and may even suck on his fingers or the side of his hand. He can hear sounds (hearing develops in the third month of pregnancy). He may try to open his eyes and may even move his eyes to a light, but he cannot see the way we do.

He has come from a world where he was gently and comfortably contained and rocked in the dark enclosure of the womb - a world where he could hear the sounds of his mother's body and her heart beat. After premature birth he may be placed on an immovable bed, in a room of bright lights, bombarded by constant loud noise and uncomfortable handling. He does not cry to indicate his discomfort or stress, rather he will demonstrate his stress by subtle changes in appearance of body functions, such as:

- changes in skin color (to blue or pale)
- changes in muscle tone (such as, limpness)
- sudden flailing of arms and legs or tremors of arms and legs
- increase or decrease in heart or respiration rates

His whole body may signal fatigue or exhaustion and his face may show discomfort. He may even try to turn away his head or eyes. These are ways that he lets us know that some event has overwhelmed him You can notice the difference when he is not stressed; he may sleep deeply with regular breathing, have good color and be able to lie in a relaxed posture.

This is the time when medical care is the most important need that your baby has. Yet, even now, there are ways you can help soothe and protect him. By doing these simple things for your baby you take the first step in playing an active part in his life.

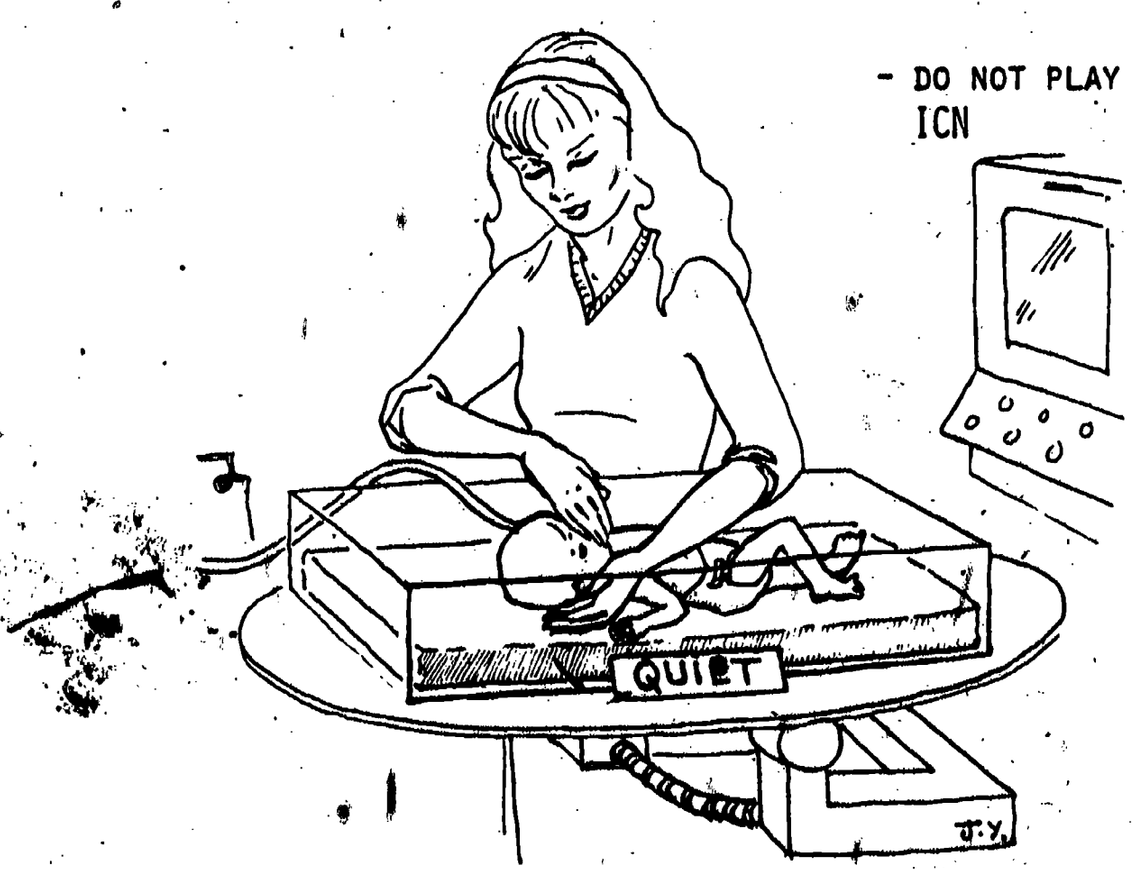
What You Can Do For Your Baby

Although your baby may be too sick to be held or respond to you, there are several ways you can help make him more comfortable and protect him from the stressful experiences in the ICN.

1. REDUCE LIGHT AND NOISE

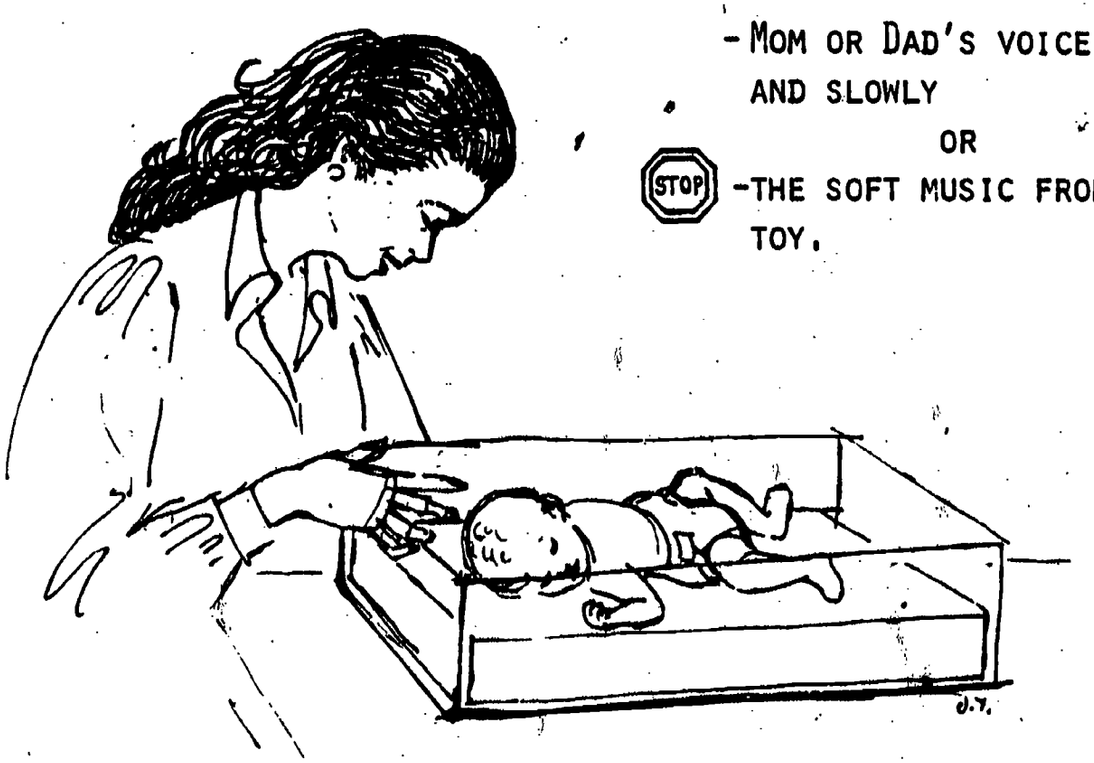
Here are some ways you can limit the noise and brightness at your baby's bedside.

- TURN OFF OVERHEAD LIGHTS
- REDUCE DIRECT LIGHTING BY USE OF BLANKET OR HAND TO SHADE BABY'S EYES
- DISCOURAGE LOUD TALKING AROUND BABY'S BED
- MAKE A "QUIET" SIGN FOR BABY'S BED
- AVOID LOUD MUSIC BOXES
- DO NOT PLAY RADIOS IN THE ICN



2. PROVIDING SOOTHING SOUNDS

During this phase of acute illness, the only sounds your baby may tolerate are soft soothing sounds which filter the excessive noises of the ICN such as:



- MOM OR DAD'S VOICE SOFTLY AND SLOWLY

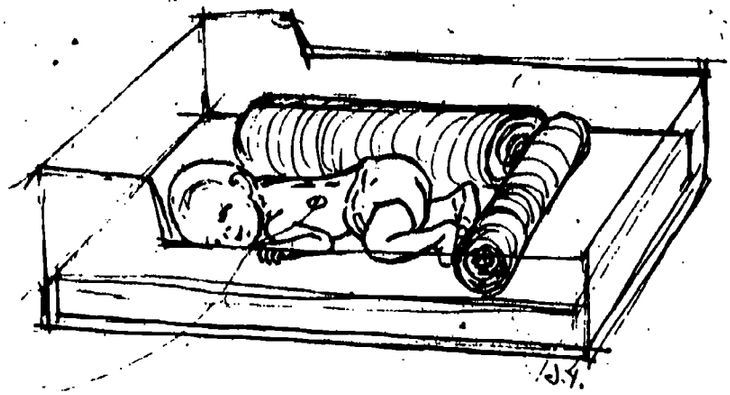
OR

STOP -THE SOFT MUSIC FROM A STUFFED TOY.

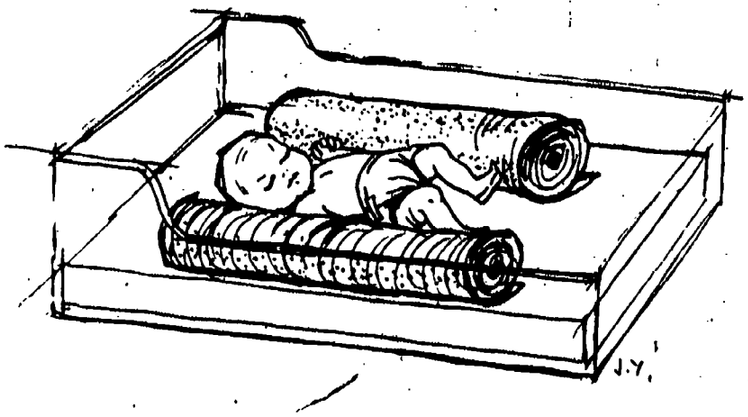
STOP STOP IF BABY SQUIRMS OR TURNS AWAY OR EXHIBITS CHANGES IN HEART RATE, RESPIRATORY RATE OR COLOR; TRY AGAIN LATER.

3. POSITION BABY COMFORTABLY

To help your baby's muscle tone develop, the following positions are recommended.



- PLACE BABY ON TUMMY FOR 2-3 HOURS WITH LEGS TUCKED IN CLOSE TO HIS BODY. PUT ROLLED BLANKETS AT SIDES AND FEET.



-TO VARY HIS POSITION PLACE HIM ON HIS RIGHT OR LEFT SIDE, USING ROLLED BLANKETS TO SUPPORT SIDES AND FEET. POSITION BABY SO HIS HANDS CAN COME TOGETHER.

-IF HE MUST BE ON HIS BACK USE BLANKET ROLLS AT HIS SIDE AND HELP KEEP HIM SECURE.

STOP -IF LIMBS ARE RESTRAINED TO PROTECT AN IV, POSITION SIDE-LYING WITH LIMBS CURLED UP WITH HANDS AS CLOSE TO MOUTH AS POSSIBLE.

STOP STOP IF ANY POSITION UPSETS THE BABY, TRY ANOTHER ONE.

4. SOOTHING YOUR BABY

These are a variety of ways to reduce irritability and help your baby remain calm. Find which works best for your baby.

STOP -OFFER FINGER FOR BABY TO GRASP

-LET HIM SUCK ON A PACIFIER OR YOUR LITTLE FINGER

-REST YOUR WHOLE WARM HAND OR BOTH HANDS OVER HIS BODY OR HEAD TO CALM HIM

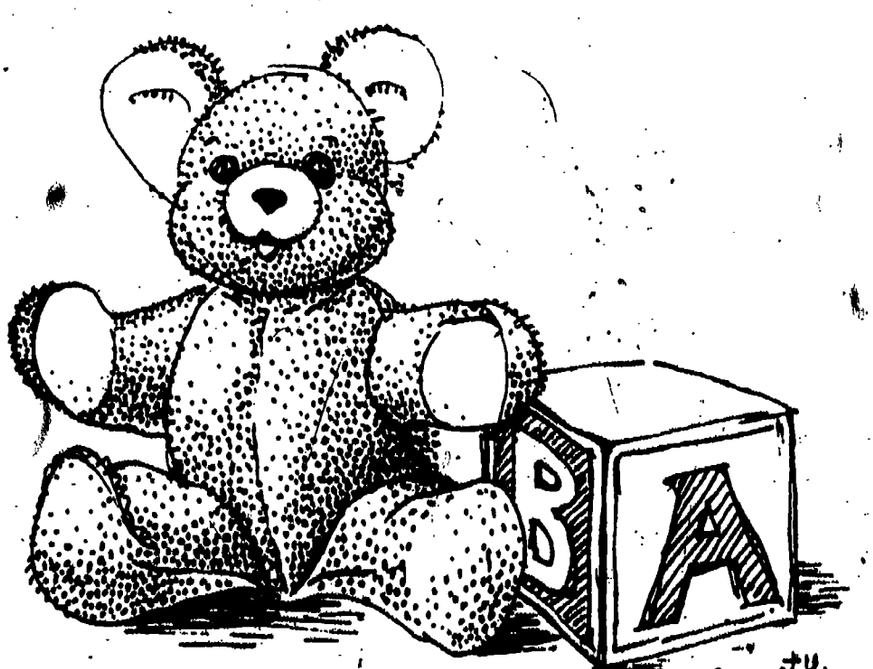
-GIVE BABY REST PERIODS BETWEEN ACTIVITIES SUCH AS DIAPERING AND HANDLING. LEAVE UNDISTURBED FOR UP TO 3 HOURS WHENEVER YOU CAN

-TRY TO FIND THE MOST COMFORTABLE POSITION FOR BABY AND USE CONSISTENTLY

-WHEN TURNING BABY OVER, HOLD LEGS AND ARMS CLOSE TO HIS BODY AND TURN <u>SLOWLY</u>

STOP STOP DISCONTINUE ACTIVITY IF HEART RATE, RESPIRATORY RATE OR COLOR CHANGES DRAMATICALLY. BE FLEXIBLE, FIND WHAT WORKS BEST AND USE IT.

THE PREMATURE BABY: THE SPECIAL CARE PHASE



THE SPECIAL CARE PHASE - WHAT BABY IS LIKE...

A major step has been reached for the baby who can be weaned from the respirator to breathing on his own with the assistance of hood oxygen to facilitate the last stage of learning independent breathing. He has now graduated from the open table to an isolette. The isolette maintains the baby's body temperature hence facilitating growth. The baby may now be fed through the gavage tube (a process by which a tube is inserted through mouth or nose into the stomach and food is slowly dripped in).

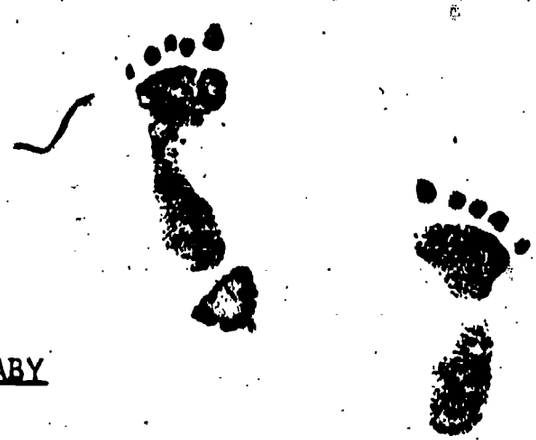
Your baby may now begin to waken more regularly for short periods of time. At first these periods may be as brief as 1-2 minutes, but these can stretch to as long as 10 minutes as he grows. At other times he may open his eyes half way and appear drowsy. It can be frustrating to visit day after day and have just missed these brief awake periods which may occur before or after bathing or other handling procedures. You may want to time your visit to coincide with bath-time, if this is a time the nurse has noted as being a typical awake period.

His movements may become more frequent. Since he has more freedom (not being limited by the respirator, tubes and other life support mechanisms), he may show a favorite place to snuggle into, or a favorite position. Also, without the tubes and other life support mechanisms the baby is more accessible and can be handled for longer periods of time. He may arouse, startle and even throw his arms out when removed from the isolette, but once wrapped snugly and held closely next to you he will relax and probably sleep. Some babies when held alert easily and remain awake while others relax and prefer to sleep. He may still be very

sensitive to uncomfortable handling and still react with stress to repeated lab tests, suctioning procedures, and even being touched frequently. He now may begin to cry when upset, although he will still continue to show his stress with changes in color, muscle tone and movement.

Activities should always be appropriate to his needs so it is important to take into account what he can tolerate. He is still fragile and he can tire easily; yet, he is beginning to show the first signs of social responsiveness. When rested and calm and awake he may look right at you, or turn toward your voice or even try to smile. At this stage very mild, simple and sensitive forms of gentle interaction can be offered. But remember to observe his responses. Note what tires him and when. Look for small signs of stress, such as grimaces, jerky movements, fatigue or paleness. Pay attention to when his alert periods occur most regularly and offer your face or voice at these times.

Remember that your touch, voice and face are powerful and strong stimulation for him and even though important to him, at times he may be too weak to respond. At other times he may become easily overstimulated and look panicked. At this stage your baby may not be able to cope with being touched, looked at, talked to and rocked all at the same time. It is best to watch how he reacts to one form of interaction (for example, being looked at or being talked to) before adding the next.



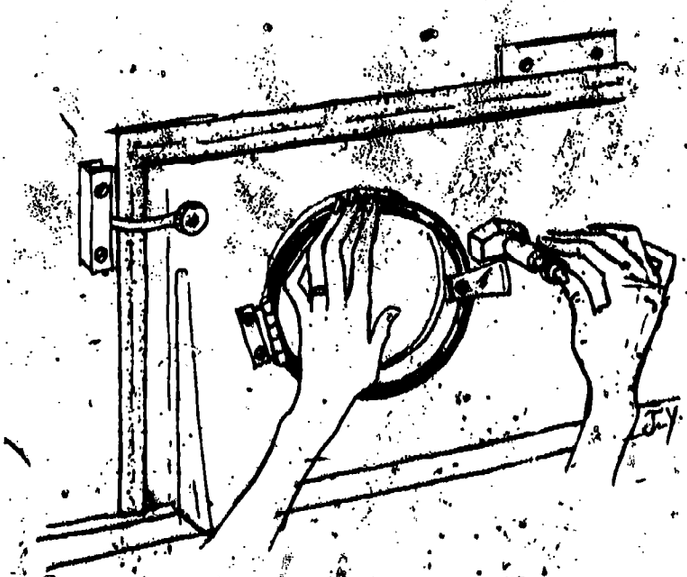
What You Can Do For Your Baby

REMEMBER to proceed cautiously. At this stage your baby is only ready for limited amounts of activity.

1. REDUCE LIGHT AND NOISE

Try these suggestions while holding your baby or while he is in his isolette.

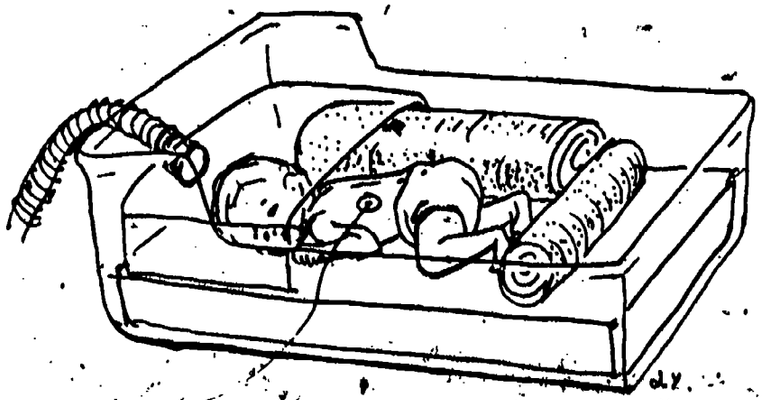
- COVER ISOLETTE WITH BLANKET TO BLOCK OUT BRIGHT LIGHTS
- WHILE HOLDING BABY, SHADE BABY'S EYES WITH YOUR HAND
- FACE BABY AWAY FROM LIGHT WHEN HOLDING HIM
- CLOSE ISOLETTE DOORS SOFTLY
- DURING NOISY TIMES IN THE UNIT (E.G. ROUNDS OR SHIFT CHANGES), AVOID TAKING BABY OUT OF ISOLETTE
- IF HE REACTS SENSITIVELY TO TELEPHONES OR ALARMS, SEEK A QUIETER PLACE IN THE ICN



2. POSITION BABY COMFORTABLY

To continue to encourage muscle tone the following positions are recommended.

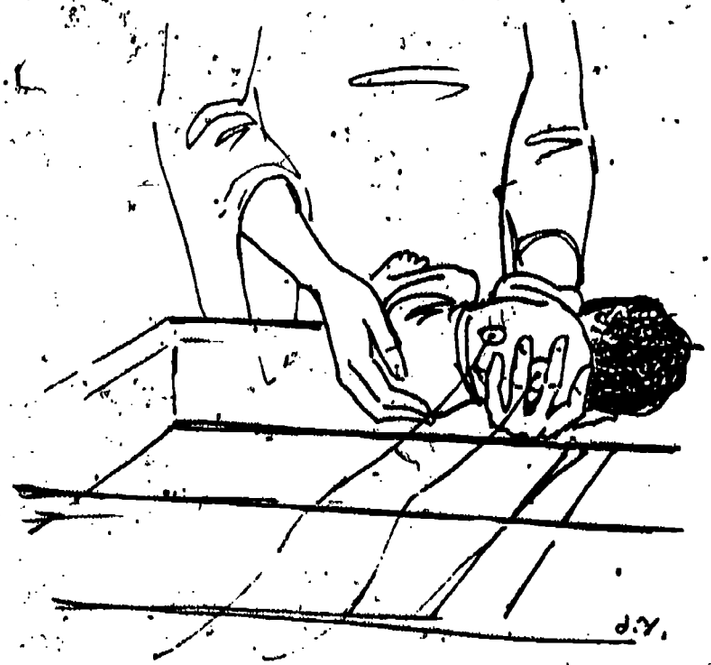
IN THE ISOLETTE:



- NOTE BABY'S FAVORITE POSITION IN THE ISOLETTE AND HELP HIM TO MAINTAIN IT

OR

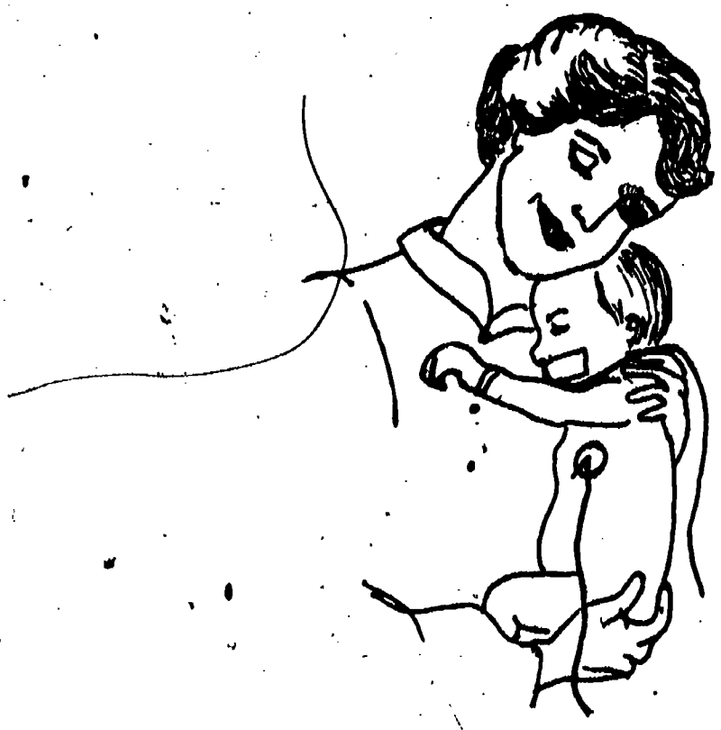
- POSITION ON TUMMY OR ROTATE TO SIDELYING; PLACE BLANKET ROLLS AT FEET AND SIDES TO HELP BABY MAINTAIN A FETAL POSITION



- POSITION SO BABY CAN SUCK HIS OWN HAND OR FINGERS

- WHEN TURNING INFANT OVER HOLD LEGS AND ARMS CLOSE TO HIS BODY AND TURN OVER SLOWLY

HOLDING:



- HOLD BABY CRADLED IN YOUR ARMS CLOSE TO YOUR BODY AT LEAST ONCE A DAY

- WHILE HOLDING BABY CLOSE - HELP HIM CUDDLE TOWARD YOU

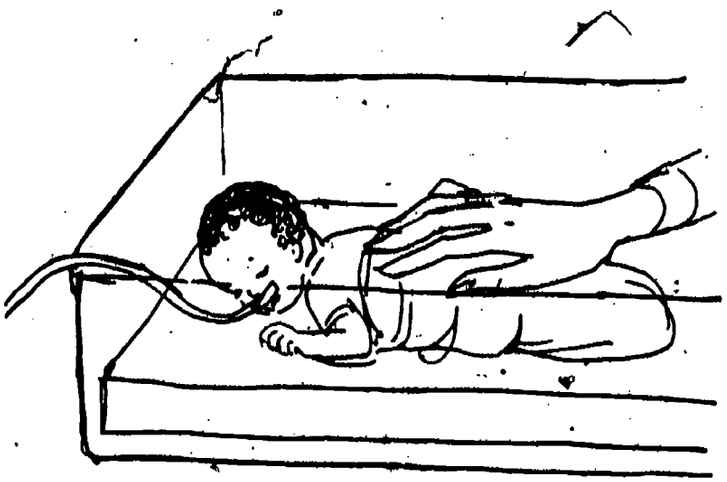
OR

STOP - SIT IN ROCKING CHAIR AND ROCK BABY SLOWLY

STOP .STOP IF HEART RATE OR RESPIRATORY RATE CHANGES, OR IF A COLOR CHANGE TO PALE OCCURS. STOP THE ACTIVITY AND GIVE BABY TIME TO REST. TRY AGAIN LATER.

3. SOOTHING BABY

This list is offered as a guide for soothing the premature infant. One infant would never need all of these activities. Select the ones which are appropriate for your infant.



- GIVE 15-30 MINUTE BREAKS BETWEEN CAREGIVING PROCEDURES (SUCH AS DIAPERING, FEEDING, ETC.)

- LET HIM SLEEP UNDISTURBED FOR AS LONG AS 2-3 HOURS

- AVOID OVERTIRING HIM - THIS CAN MAKE HIM FUSSY

- PLACE BABY ON TUMMY WITH ARMS AND LEGS TUCKED CLOSE TO BODY

OR

- PLACE HIM ON HIS SIDE WITH HIS LEGS TUCKED CLOSE TO HIS BODY. PLACE ROLLED BLANKET AT FEET AND BACK TO HELP HIM MAINTAIN THIS POSITION

OR

- SWADDLE HIM BY WRAPPING HIS BODY, ARMS AND LEGS SNUGLY WITH BLANKETS

OR

- OFFER PACIFIER OR YOUR LITTLE FINGER TO SUCK

OR

- TALK SOFTLY TO HIM

OR

- PICK BABY UP AND HOLD HIM AT YOUR SHOULDER, CUDDLE HIM AGAINST YOU

OR

STOP - PICK BABY UP - HOLD AND ROCK HIM VERY GENTLY

STOP STOP IF ANY TECHNIQUE IS INEFFECTIVE AND TRY ANOTHER. TRY TO FIND YOUR BABY'S PREFERENCE AND OFFER IT CONSISTENTLY.

4. VISUAL EXPERIENCES

At first babies can only handle one stimuli at a time, that is , face alone or voice alone. We do not recommend combining them until baby can focus and follow easily. As soon as you note periods of alertness, begin to offer the following.

STOP - WHEN HE IS WIDE AWAKE IN HIS ISOLETTE, OFFER YOUR FACE 8-10" IN FRONT OF HIS FACE (DO NOT TALK). Is HE ABLE TO FOCUS ON YOUR FACE?

STOP - IF BABY CAN LOOK AT YOU, SLOWLY MOVE YOUR HEAD FROM ONE SIDE TO THE OTHER. ENCOURAGE BABY TO FOLLOW YOUR FACE - STILL WITHOUT TALKING

STOP - IF HE IS ABLE TO LOOK AT YOUR FACE FOR UP TO 30 SECONDS, BEGIN TO TALK SOFTLY

OR

STOP - PLACE A COLORFUL PARTY PAPER PLATE IN ISOLETTE 8" IN FRONT OF HIS EYES

STOP STOP IF BABY LOOKS AWAY OR BECOMES AGITATED (YAWNING, SNEEZING OR HICCUPING CAN BE SIGNS OF AGITATION). STOP AND TRY AGAIN LATER.

5. PROVIDE SOOTHING SOUNDS

Here are some sounds your baby may like.

STOP - THE SOFT MUSIC FROM A STUFFED TOY.

OR

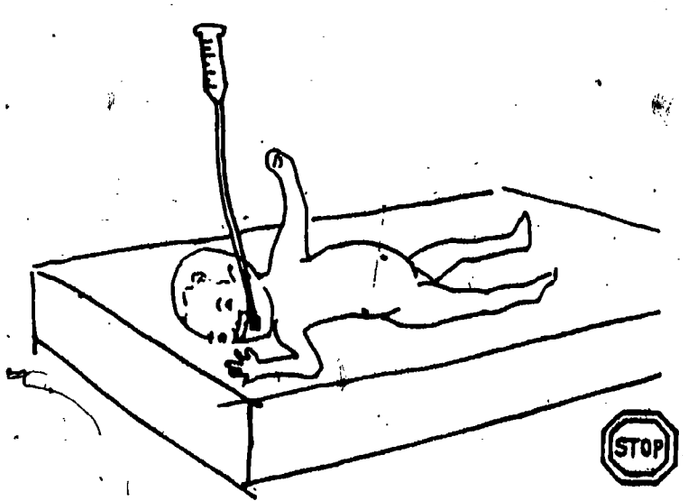
- WHEN BABY IS CALM AND AWAKE TRY TALKING OR SINGING TO HIM SOFTLY
- DURING ONE OF YOUR BABY'S ALERT PERIODS (WHEN HE IS FOCUSING ON YOUR FACE) BEGIN TO TALK SOFTLY TO HIM.

STOP - LISTEN TO THE SOUND OF THE MUSIC BOX BEFORE OFFERING IT. AVOID LOUD SOUNDING ONES.
STOP TALKING IF BABY LOOKS AWAY, CLOSES HIS EYES, YAWNS, SNEEZES, OR IF YOU NOTE CHANGES IN HIS HEART RATE OR RESPIRATORY RATE. TRY AGAIN LATER.

6. PREPARING BABY TO FEED

At this phase your baby needs to practice sucking. This will prepare him to be breast or bottle fed later.

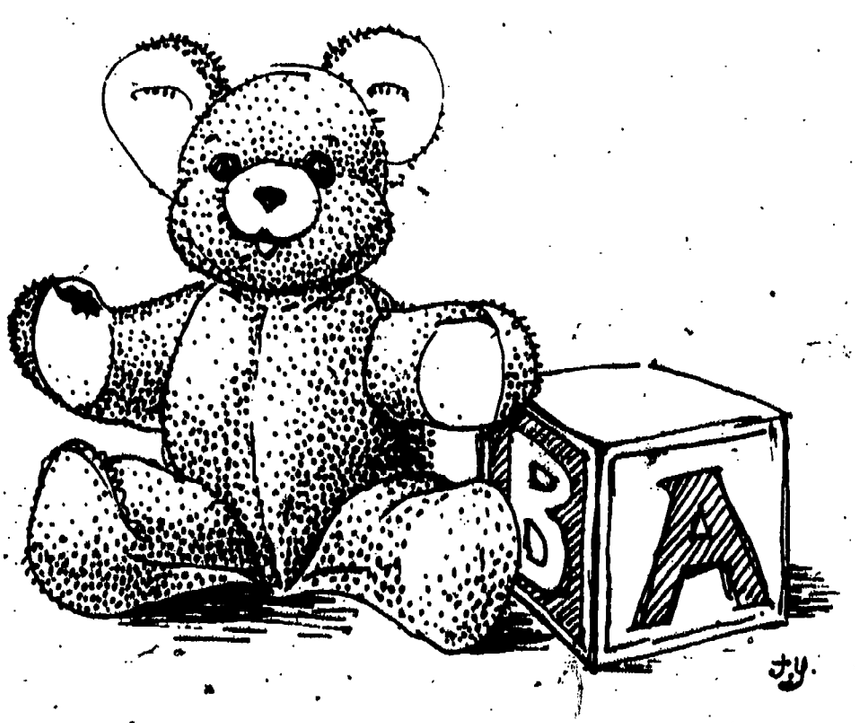
Sucking may be very tiring. Give him plenty of time to rest after the following activities.



- OFFER A PACIFIER TO BABY DURING GAVAGE OR TUBE FEEDINGS
- OFFER PACIFIER WHILE BABY IS LYING IN HIS ISOLETTE
- PLACE IN A POSITION SO BABY CAN SUCK ON HIS OWN FINGERS
- WHILE YOU ARE HOLDING YOUR BABY COMFORTABLY, INSERT YOUR LITTLE FINGER AND STROKE THE ROOF OF HIS MOUTH VERY SLOWLY BACK AND FORTH. THIS SHOULD STIMULATE THE SUCK REFLEX.

STOP PRACTICE IF BABY TIRES, BECOMES AGITATED OR TURNS AWAY.

THE PREMATURE BABY: THE CONVALESCENT PHASE



THE CONVALESCENT BABY - WHAT BABY IS LIKE...

At last your baby has most of the medical procedures, tests and treatments behind him. He has been moved out of the isolette into a nursery crib. Some babies at this stage still require small amounts of oxygen. The main task for the baby is to grow.

During the phase of convalescence his energy reserves are still low. He is beginning to learn to make the transition from gavage feeding to sucking from a nipple. The bottle will be alternated with gavage feeding until your baby can take all his food by nipple. Remember this is a very new and tiring experience, and is a great deal of work for a baby who has been sick. Like any new skill, feeding must be learned so your patience is essential. You the parent, with guidance from the nurses, will be the best teacher of this new skill.

Some babies now show more regular periods of waking and sleeping while others are very unpredictable. Some sleep a great deal during this phase of recovery. However, when your baby is awake you will notice that he may be able to focus his eyes on your face for a few seconds or longer. If he is not too tired, he may try very hard to begin to use his eyes more and more. Although he will not be able to see as clearly as adults do for several more months, the ability to focus and follow a moving face or bright object is now developing. Looking can be too much at times and you may see him close his eyes or look away. This is his way of telling you that he needs a rest - take a break and try again later.

If your baby has had periods of strong, intense irritability, these may now be coming under control or showing signs of lessening. He may still need help sometimes in order to stay

calm. By now you and his nurses have some idea of what can be done to soothe him. Positioning him so he can get his hands to his mouth and suck on them may also help him to soothe himself.

At this stage your baby may more actively be moving his arms and legs. He may lift and turn his head as you hold him at your shoulder. He loves to be held and now as you hold him, encourage his cuddling and turning toward you. If your baby is awake for up to 30 minutes he is showing you his readiness to deal with face to face play. Now is the time that you and your baby can begin to get to know each other and play together.

Your baby, all at once, is beginning to look like that baby you expected during your pregnancy. The end of the ICN stay is in sight and you hear talk preparing you and your baby for discharge. Excitement can be mixed with fear and anxiety as you wonder what it will be like caring for your baby at home, alone without medical personnel and support. This section is designed to build on the steps you are taking towards developing a relationship with your baby as you expand your mutual enjoyment of each other.

What You Can Do For Your Baby

Now that he is having more awake periods, the following activities are designed to help your baby interact with his environment and with you.

1. POSITION BABY COMFORTABLY

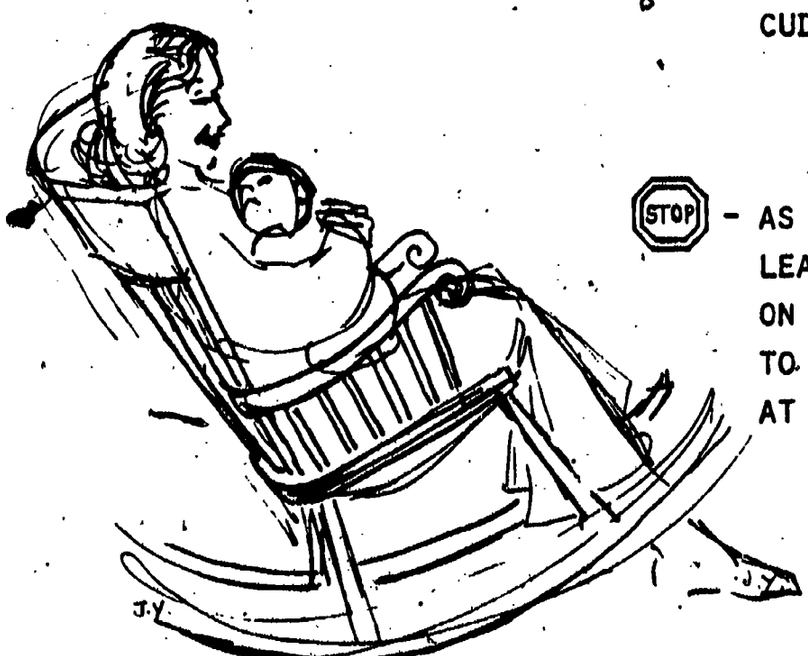
These recommendations provide opportunities not only to increase muscle tone and development but also to help your baby to view his environment.

- WHEN BABY IS AWAKE POSITION HIM ON HIS BACK SO HE CAN SEE HIS SURROUNDING ENVIRONMENT

- TIME ON HIS TUMMY AND SIDES IS STILL IMPORTANT. USE ROLLED BLANKETS TO KEEP HIS ARMS AND LEGS CURLED UP AND CLOSE TO HIS BODY

- HOLD AND ROCK YOUR BABY WHILE CUDDLING HIM CLOSE TO YOU

OR



STOP - AS YOU SIT IN A ROCKING CHAIR LEAN BACK AND PUT YOUR BABY ON YOUR CHEST. HE MAY TRY TO RAISE HIS HEAD AND LOOK AT YOU

STOP STOP DO NOT PUSH BABY TO TOLERATE THESE POSITIONS UNLESS HE IS READY.

2. TOUCH

Baby is now ready for some exposure to mild touch activities.

- LET BABY GRASP YOUR FINGER OR STROKE HIS PALMS WITH YOUR FINGERS

STOP - STROKE BABY'S LIMBS SLOWLY AND GENTLY WITH A DOWNWARD MOTION USING LOTION OR OIL. THIS IS HIGHLY STIMULATING AND SHOULD BE DONE ONLY WHEN BABY IS RESTED

STOP STOP IF BABY SHOWS SIGNS OF DISCOMFORT, SUCH AS GRIMACING, SQUIRMING, FUSSING.

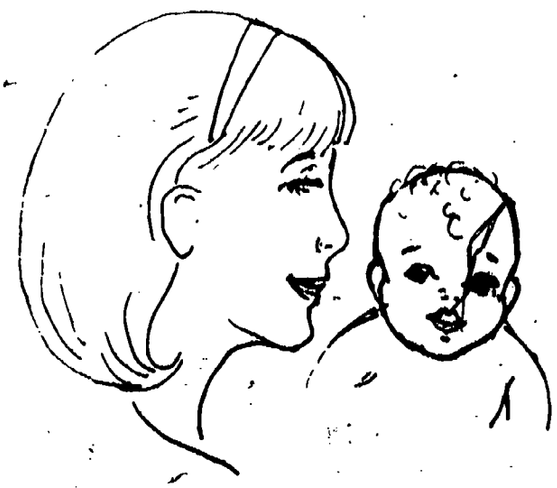
3. PROVIDE SOOTHING SOUNDS

Your baby is now capable of enjoying both sound and visual activities together, for example, your face and voice offered at the same time.

STOP - AS YOU HOLD YOUR BABY UP TO YOUR SHOULDER, TALK TO HIM AND ENCOURAGE HIM TO TURN TOWARD YOU

OR

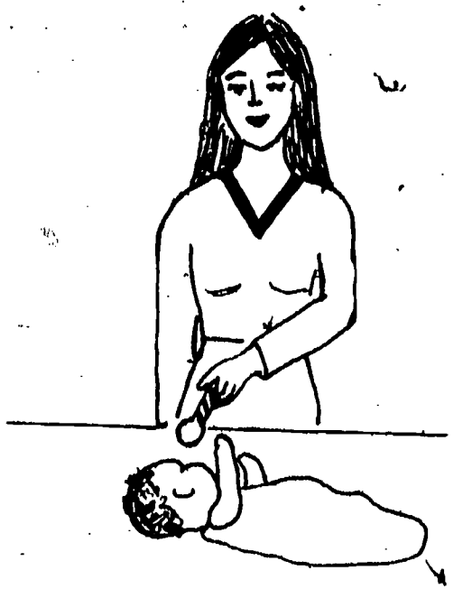
STOP - AS YOU HOLD YOUR BABY IN A FACE TO FACE POSITION TALK, LOOK AND SMILE AT HIM



STOP IF BABY SIGNALS A NEED TO REST, FOR EXAMPLE, TURNING AWAY, CLOSING HIS EYES, BREATHING FASTER OR SLOWER OR LOOKING FATIGUED. TRY AGAIN LATER.

4. VISUAL EXPERIENCES

Offer the following activities when baby is in a quiet alert state for up to 3 minutes.



STOP - OFFER YOUR FACE 8-12" IN FRONT OF YOUR BABY. ONCE YOU SEE HIM FOCUSING ON YOUR FACE, MOVE FROM SIDE TO SIDE SLOWLY AND THEN UP AND DOWN. ENCOURAGE YOUR BABY TO FOLLOW YOU. IF YOU LOSE HIS ATTENTION BEGIN AGAIN

OR

- FOLLOW THE SAME GAME WITH A BRIGHT RED BALL OR RATTLE

OR

- POSITION 1-2 BRIGHT TOYS IN HIS CRIB - ONE ON EACH SIDE OF BABY

STOP STOP IF BABY SIGNALS THAT HE IS OVERSTIMULATED OR HAS HAD ENOUGH. HE MAY SIGNAL THIS BY: CHANGES IN COLOR OR RESPIRATORY RATE OR BY YAWNING, SNEEZING OR HICCUPING.

5. PREPARING BABY TO FEED

Feeding is a new experience for your infant. Some-days he may be too tired to feed and other days feeding may go perfectly. Remember, feeding takes energy and practice. The following are suggestions for readying your baby for feeding.

- BEFORE EACH BOTTLE FEEDING WET YOUR FINGER WITH STERILE WATER THEN OFFER YOUR FINGER TO STROKE THE ROOF OF YOUR BABY'S MOUTH. DO THIS FOR 1-2 MINUTES. THIS TECHNIQUE STIMULATES BABY'S SUCK

- SIT COMFORTABLY IN A ROCKING CHAIR IN A QUIET AREA AND CUDDLE YOUR BABY CLOSE BEFORE YOU BEGIN THE FEEDING. RELAX. THIS IS NOT THE TIME TO OFFER FACE TO FACE STIMULATION - SAVE YOUR BABY'S ENERGY FOR FEEDING. AVOID INTERRUPTIONS

- EXPERIMENT WITH THE VARIOUS NIPPLE SIZES AVAILABLE IN THE ICN TO FIND WHICH SIZE PROVIDES THE BEST FLOW FOR YOUR BABY

STOP - AT FIRST OFFER SMALL AMOUNTS OF FORMULA (5 SUCKS AT A TIME-STOP). BABIES NEED HELP PACING THEMSELVES SO TAKE FREQUENT RESTS. ALLOW BABY TIME TO COORDINATE SUCKING, SWALLOWING AND BREATHING

STOP STOP IF BABY IS FATIGUED OR IF COLOR OR RESPIRATORY RATE CHANGES. GIVE BABY A LONG REST OR TRY LATER.

CHAPTER 2

THE INFANT WITH SPECIAL NEEDS

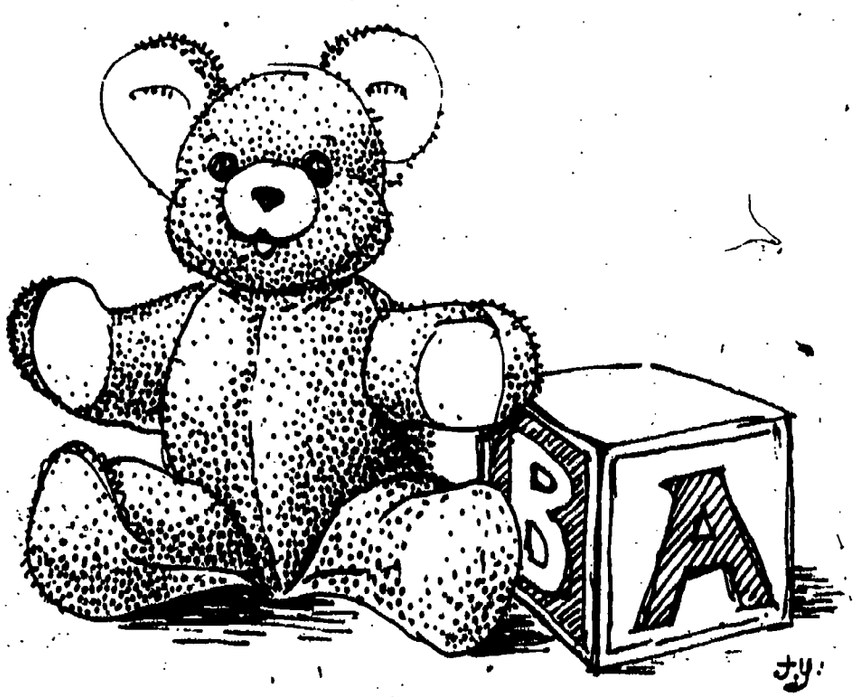
THE INFANT WITH SPECIAL NEEDS

This chapter offers suggestions for three types of SPECIAL NEED infants: the infant with bronchopulmonary dysplasia (BPD), the small for gestational age (SGA) baby, and the baby who has undergone surgery. A description of these special babies and their unique characteristics are included here to help you understand their special needs.

It is especially difficult for parents [redacted]ear that there are special problems facing their baby. If your baby has been identified as having one of these problems, the doctors and other medical personnel responsible for your baby will be your first source of information and guidance. The baby's health and medical treatments will be the most important concern initially.

The following are suggestions to position and soothe your baby. As he recovers you will be able to use the suggestions in Chapter 1 integrating them with the special suggestions in this chapter.

THE INFANT WITH SPECIAL NEEDS: THE BABY WITH BPD



THE BABY WITH BPD - WHAT BABY IS LIKE...

Bronchopulmonary dysplasia (BPD) is a lung disease, a scarring of the baby's lung tissue as a result of the oxygen therapy needed after birth. Most babies with BPD outgrow it eventually, but this disease can affect development and behavior in the early months and years.

Babies with BPD frequently may be very irritable and hard to soothe. This is not the fault of the parent, the nurses, or the baby's medical care. It usually results from breathing problems which may make the baby uncomfortable or cause excessive fatiguing and fussiness.

Feeding and handling may also cause irritability. Many have observed that these babies may not enjoy being touched or cuddled. When fatigued they become more difficult to soothe. However, these babies do respond to consistent patient efforts to calm them. It is important to avoid tiring activities or too many activities at once. Offer each daily event one at a time with plenty of time in between to rest. Events such as, bathing, diapering and face to face play should be planned during waking periods only.

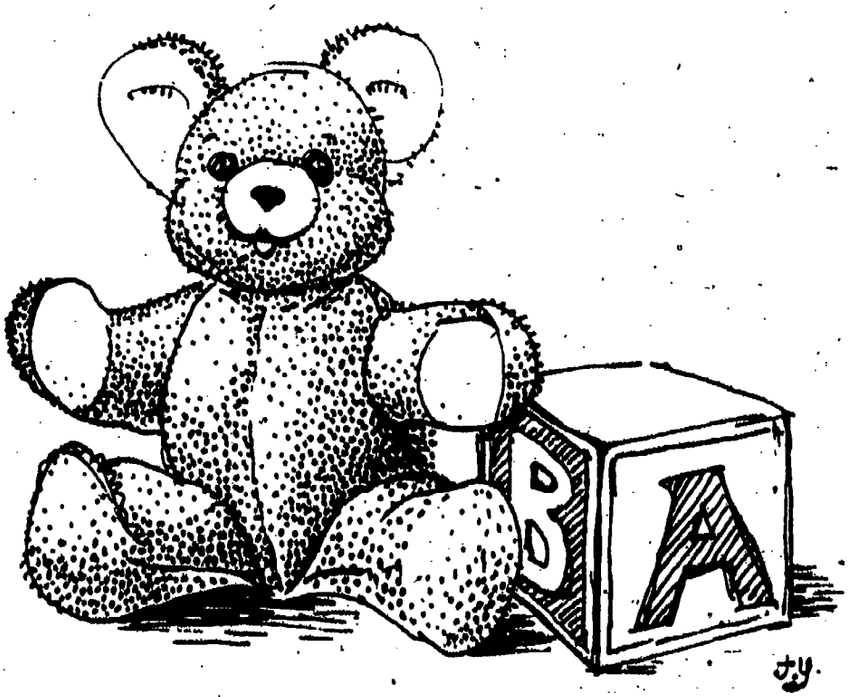
The reduction of light and noise around your BPD baby can help to keep him calm. This can be accomplished by covering the crib or isolette with a blanket to block out the nursery lights. Make sure baby's crib is not near loud speaker microphones or vulnerable to heavy traffic and excessive noise in the nursery. Babies with BPD respond with less irritability if handled only when absolutely necessary during their most fussy days. These babies need time to sleep for as long as 2-3 hours undisturbed. Caregiving activities, such as diapering and feeding, should be timed for waking periods with rest periods in between them. Sometimes just holding baby quietly without talking is relaxing for both parent and baby.

The usual way to calm crying babies is to pick them up, rock them and talk to them. These are stimulating activities in themselves and are not appropriate for the BPD baby who needs the reduction of stimulation, as he is usually crying from overstimulation, fatigue and/or breathing difficulties. These babies soothe best to repositioning as well as reducing light and noise around them. Reduce stimulation by swaddling, placing on tummy in quiet crib and offering a pacifier. Place rolled blankets around sides and at feet. Cover crib to reduce light, avoid talking, and pat baby on the back in rhythmical pattern. It is not unusual for this routine to take up to 20-30 minutes to calm baby, but if offered consistently it may help the infant to get the rest he needs.

Be sure to make a habit of observing how your baby responds to various handling techniques and what upsets him or what causes an increase or decrease in breathing. Watch for patterns which may emerge throughout his daily routine related to how he is handled. If you note that he is more tired and irritated by his bath than by his feeding, you may want to time his bath for his most rested times. These are ways that you help him stay calm and put his energy into breathing and gaining weight.

THE INFANT WITH SPECIAL NEEDS:

THE BABY WHO IS SMALL FOR GESTATIONAL AGE (SGA)



THE SGA BABY - WHAT BABY IS LIKE...

The baby who is small for gestational age (SGA) needs protection and careful handling. Positioning these babies on their tummies or sides with blanket rolls at sides and at their feet affords them an opportunity to maintain control of body movements. When handling or turning over, be careful to hold the arms and legs close to the body, so as to avoid jerky or random movement which may cause irritability. These babies prefer to be swaddled or just held closely. If your baby cannot yet be held, place your whole warm hand over the baby's back, after you have gently tucked his arms and legs under him while he rests on his tummy. This can be a way of feeling your touch all over his body and can often prevent sudden upsetting movements.

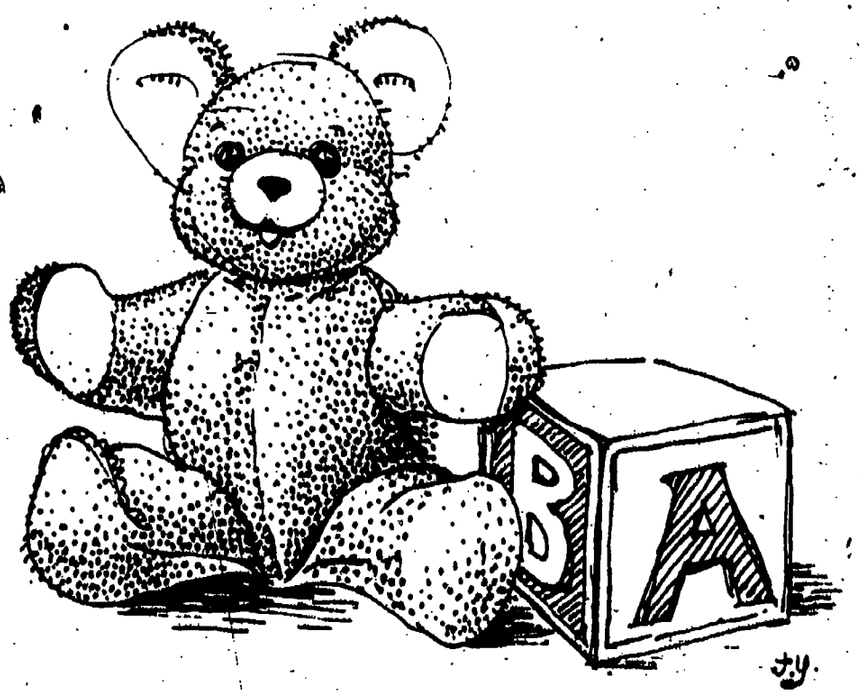
Sometimes you may see these babies trying to calm themselves as they bring their hands close to their face. This may be your baby's attempt to suck on his fingers, a reflex response, that can actually help the baby remain calm. These babies need help maintaining this position and so holding his hand near his mouth or helping him suck on this fingers may calm him. At other times the pacifier or your little finger to suck may work as effectively.

As these babies begin to wake up and look around they are easily overwhelmed by sounds and sights. Offering one thing at a time, that is, voice alone or face alone, at first helps them slowly develop their attention. Watch for any sign of fatigue or a signal for time out, such as closing the eyes, yawning, hiccupping or turning away. This does not mean the baby does not want to look at you. It means that the stimulation is a little too strong and must be

simpler for him to process. At this point stop, back away; when baby has relaxed and alerted again, try interaction again, more slowly with voice alone or face alone. Work for some brief focusing or widening of the eyes to your voice. Eventually, as your baby has more practice, he will be able to watch and listen for longer periods.

THE INFANT WITH SPECIAL NEEDS:

THE BABY WHO HAS HAD SURGERY



THE BABY WHO HAS HAD SURGERY - WHAT BABY IS LIKE...

Immediately after surgery babies will sleep for several hours. This is because they were sedated for the surgical procedure. As the need for medication subsides, he will begin to show more movement and awareness of his environment. As with anyone recovering from surgery, he will be nonresponsive, very fatigued, weak and possibly irritable. It is best during these first days after surgery not to initiate social interaction. The baby needs to put his energy into getting well. However, offering your soothing voice and touch can be very comforting and stabilizing. Try what you know to be effective in soothing your baby (e.g., stroking or holding his hand, stroking his forehead, or placing your warm hand over his back), keeping in mind that this stimulation at this time may be too much for him. If he seems stressed he may just need to be left alone.

This is the time to shield your baby from any additional environmental stresses. You can incorporate the environmental modifications from Chapter 1 of this book, such as, reducing light and noise around him. Also, be sure baby is comfortably positioned with soft rolled blankets to support his feet and limbs.

There may also be times when he may be unconsolable and you will feel helpless in spite of all your efforts. Remember he has good reasons to cry and be irritable and sometimes the release of tension that long crying brings is a relief in itself. These times are inevitable and temporary. The best way to handle this time as a parent is to work with the nurses in making him as comfortable as possible and to keep in mind that it is not always possible to soothe an irritable baby.

As soon as he is able to be held, just resting quietly in your arms will be a wonderfully fulfilling experience for both you and your baby. You can hold him close and cuddle him gently. Do not expect him to turn toward your voice, or to demonstrate eye contact as he is putting all his energy into getting well. It should be noted that in spite of the discomforts these babies often begin to show consistent efforts to look and attend to faces and voices as soon as they start to feel better. As they recover and begin to feel less discomfort, they will begin to show more energy and responsiveness. You will begin to notice longer periods of wakefulness, less need for sleep, a brighter alert look, prompt responses to voices and more muscle strength and tone developing.

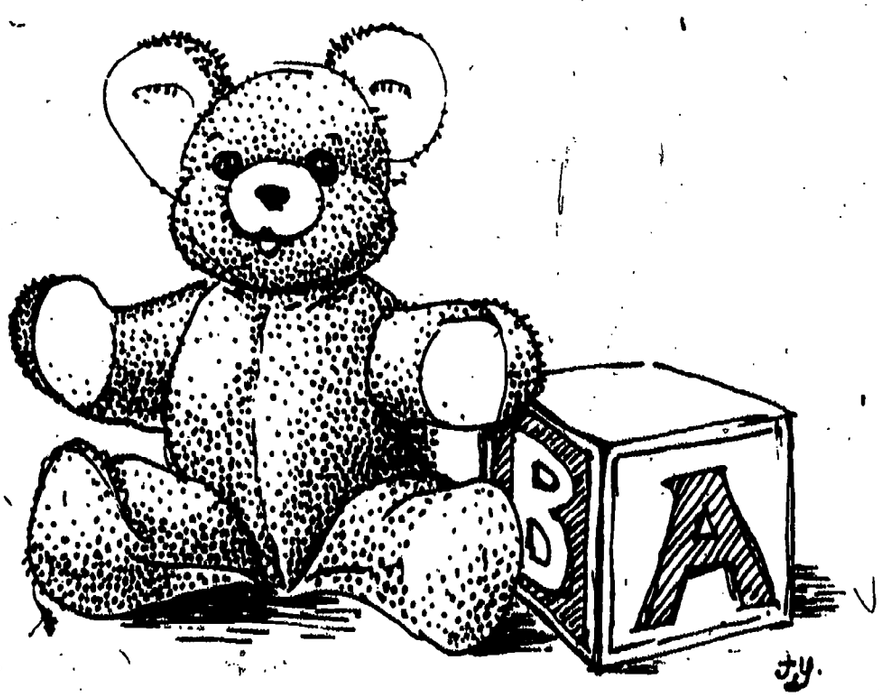
It is important to take your cues from your baby and respond to his emerging skills. You can create a learning environment in the crib with a favorite picture, a mobile and/or a mirror (see Chapter 1, The Convalescent Baby for appropriate activities). As always, it is important to avoid overtiring and to recognize your baby's signs of fatigue and overstimulation. Removing toys from the crib, holding him closely and rocking gently in a quiet room are all ways to reduce the source of fatigue and help your baby get his needed rest. Providing gentle, sensitive stimulation that is not too demanding can benefit and encourage development even while your baby is convalescing.

CHAPTER 3

STEPPING OUT...BRINGING YOUR BABY HOME

STEPPING OUT - BRINGING YOUR BABY HOME:

THE FIRST 24 HOURS



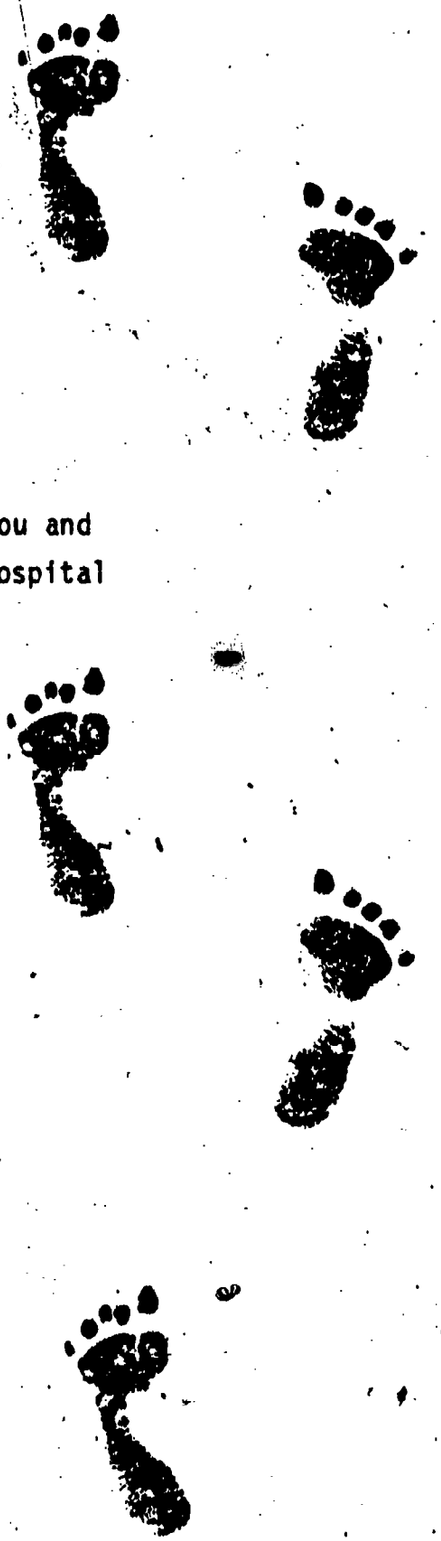
THE FIRST 24 HOURS - WHAT BABY IS LIKE...

When you first bring your baby home, he may react to his new surroundings in a variety of ways. You may find that he is wide-eyed, alert and reactive to all the new sights, sounds and activities around him. He may even be unable to settle down. Or, his reaction to his new surroundings may be one of sleepiness in an effort to shut out all the new stimulus.

The change in his environment may bring unexpected irritability. He may not sleep on the same schedule as in the hospital, and he may not sleep much the first night or two. He may sleep through feedings or demand feedings at unusual times. Remember - your baby is experiencing a tremendous change. The first 24 hours is a transition period in which he begins to make the adjustment from hospital to home. Flexibility is the key to this transition period.

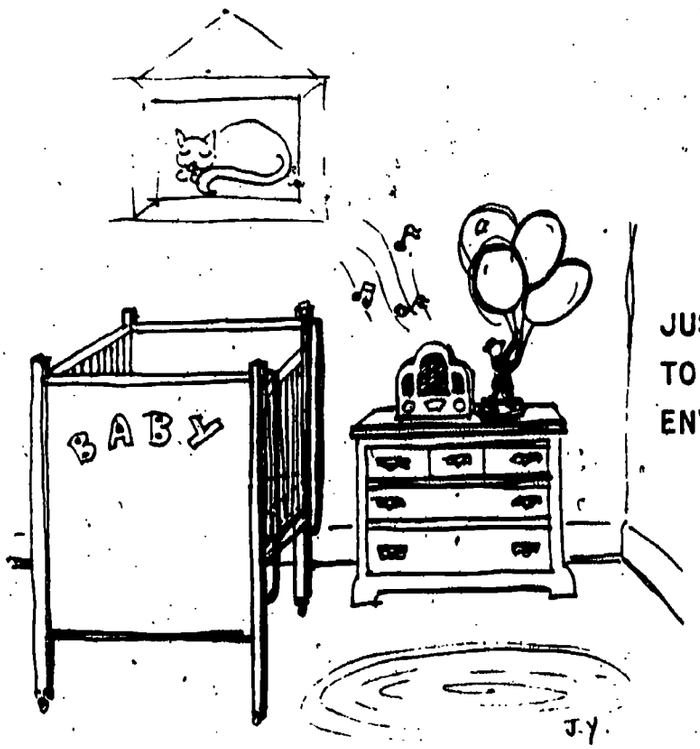
What You Can Do For Your Baby

The following activities will help you and your baby make the transition from hospital to home.



ADJUSTING TO HOME

The following activities will help in your baby's adjustment to home.



- LIMIT THE NUMBER OF PEOPLE WHO COME TO VISIT. GIVE YOUR BABY TIME TO GET USE TO HIS NEW ROUTINES

- PLACE A BLANKET ROLL AROUND HIM AND/OR SWADDLE HIM IF THAT WAS WHAT HE WAS USED TO IN THE ICN

JUST FOR THE FIRST NIGHT OR TWO TRY TO RECREATE A LITTLE OF THE ICN ENVIRONMENT:

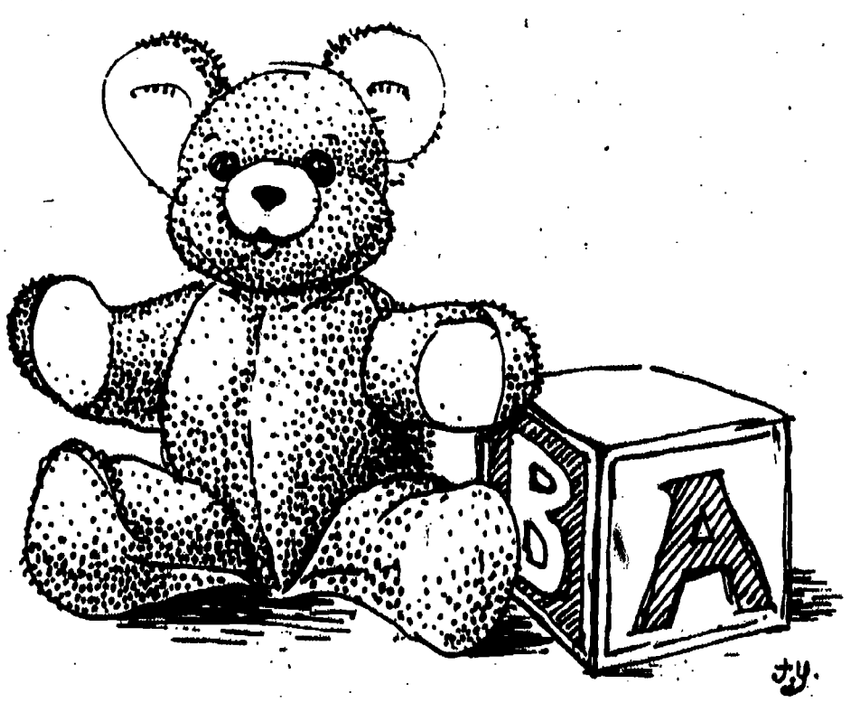
- A RADIO TURNED ON LOW DURING THE FIRST NIGHT MIGHT HELP YOUR BABY ADJUST - THIS IS TO RECREATE THE SETTING YOUR BABY JUST CAME FROM THAT WAS ACTIVE 24 HOURS A DAY

- A DIM LIGHT MAY HELP BABY ADJUST HIS SLEEP PATTERNS

FADE OUT THE RADIO AND DIM LIGHTS OVER THE NEXT FEW NIGHTS.

STEPPING OUT - BRINGING YOUR BABY HOME:

THE FIRST WEEK



THE FIRST WEEK - WHAT BABY IS LIKE...

During this week you and your baby will be getting to know each other in a very special way. As parents you are learning adjustments that will help your baby become a part of your family and your daily routine.

Total responsibility for the care of a baby coming home from the Intensive Care Nursery can be overwhelming, particularly if the baby needs continued medical treatments by you at home. You may find that the baby is more demanding and harder to satisfy than you expected. The baby may cry a lot and take an hour to feed the smallest amounts. He may sleep at odd times. He may get overstimulated and fussy from the normal noise and activity of your household. It is not uncommon to feel frustration and uncertainty in the ways you are caring for your baby.

For most babies these problems are temporary. The first week will be one of mutual learning and adjusting.

What You Can Do For Your Baby

The following are some activities which will help your baby become a more active part of your family's life.

BECOMING PART OF THE FAMILY

In the first week home from the hospital your baby may not be ready for more than just being held. The following are guidelines for helping your baby adjust to family life. Offer the following activities as your baby shows readiness.

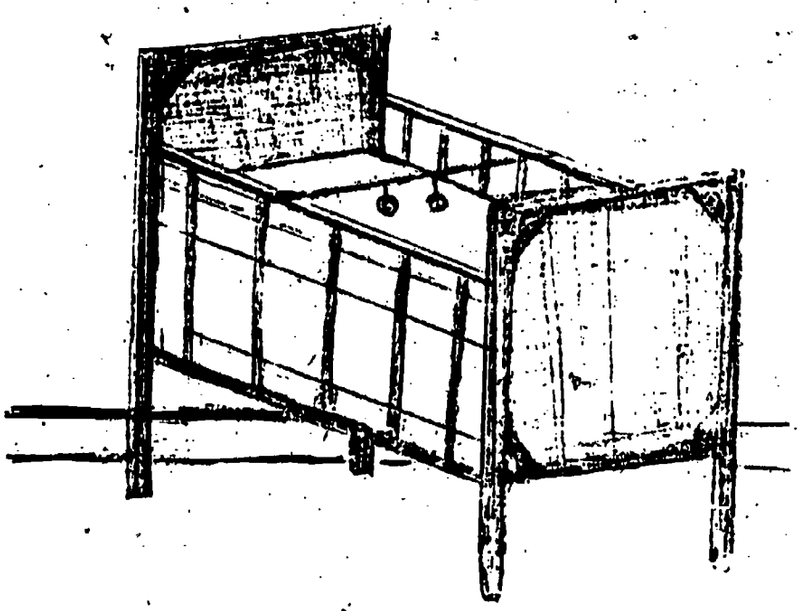
- ALLOW YOURSELF THE TIME YOU'VE MISSED HOLDING, ROCKING, AND CUDDLING YOUR BABY

- SLOWLY TRY TO ESTABLISH REGULAR TIMES FOR YOUR ACTIVITIES WITH YOUR BABY SUCH AS BATHING AND PLAYING

- WHEN BABY IS ALERT PLACE HIM IN AN INFANT SEAT AND KEEP HIM NEAR YOU AS YOU COOK OR WORK AROUND THE HOUSE. HE WILL ENJOY WATCHING YOU!

- CREATE A "CRIB ENVIRONMENT" OF THINGS TO LOOK AT AND LISTEN TO. MOBILES ARE APPROPRIATE. HANG ONE OVER BABY'S HEAD OR TO ONE SIDE IN THE CRIB. BABY MAY LIKE THE SOUNDS OF A SOFT MUSIC BOX, SUCH AS THOSE FOUND IN STUFFED ANIMALS. KEEP THE CRIB SIMPLE AND UNCLUTTERED - ONLY ONE OBJECT AT EACH SIDE

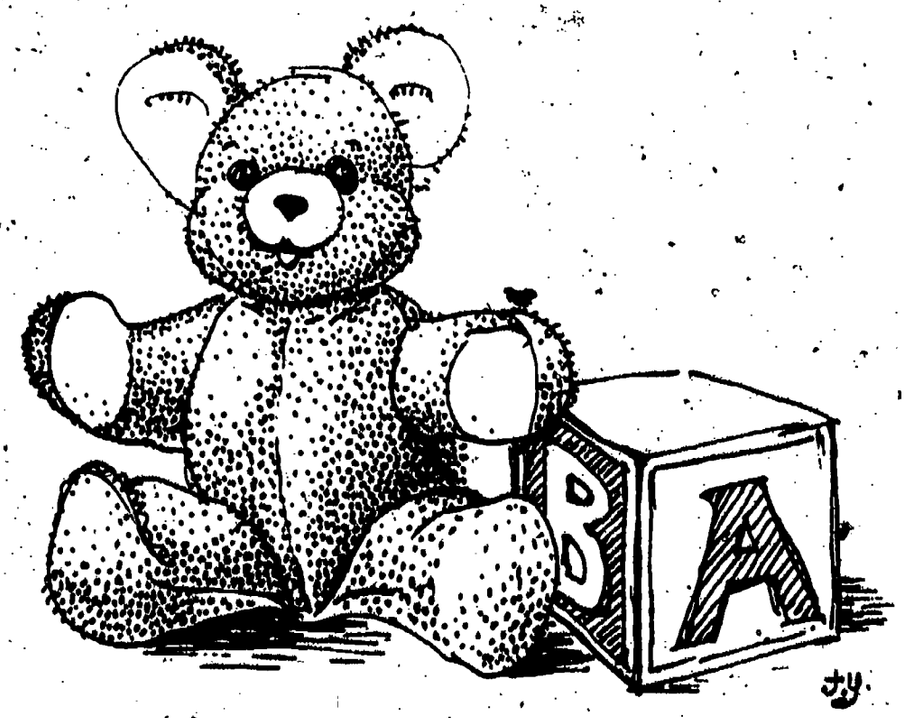
STOP - TIE A SMALL RATTLE OR OTHER NOISE MAKING TOYS FROM YARN STRETCHED ACROSS THE CRIB. POSITION THE TOY SO THAT MOVEMENTS OF THE BABY'S HAND (WHEN HE IS ON HIS BACK) WILL ALLOW HIM TO TOUCH THE TOY WHICH WILL THEN MAKE NOISE



STOP STOP IF BABY SHOWS SIGNS OF AGITATION, DROWSINESS OR LOOKING AWAY. THESE MAY BE SIGNS THAT YOUR BABY NEEDS TO REST AND SLEEP. AVOID OVERSTIMULATING YOUR BABY BY PLACING TOO MANY TOYS IN THE CRIB AT ONCE.

STEPPING OUT - BRINGING YOUR BABY HOME:

THE FIRST FEW MONTHS



THE FIRST FEW MONTHS - WHAT BABY IS LIKE...

It is important to realize that every baby develops at a different pace. For the infant who has been in the Intensive Care Nursery developmental progress will also depend on the baby's health condition, degree of prematurity and whether there are any continuing medical/developmental problems. Respect your baby's pace and realize that he may still be in a recovery period for many months.

If your baby was born prematurely do not expect that he will be doing all the things that a full-term infant will be doing. Remember to "correct" for prematurity, giving him credit for all the weeks and months that he missed growing in the womb. For example, if the baby is 3 months old, but was born one month premature, his developmental age is only 2 months.

The baby's behavior will begin to change in ways that are easy to see. He will be awake for longer periods of time. He will be interested in looking at you and objects. He will turn his head to sounds, particularly your voice. He will begin to develop the use of his hands by reaching toward, touching and later grasping at objects in front of him. His body will strengthen and his head control will become steadier.

He will begin to smile and recognize you and the people who are around him regularly. This marks the beginning of social interactions which and so important to his development. He is beginning language with cooing sounds, and may begin to imitate some of the sounds you make.

Some of the baby's developmental abilities will emerge easily, while some will seem more difficult and delayed than for other non-hospitalized babies of his age. It is natural

that you will find yourself watching for these emerging developmental milestones for reassurance that the baby is doing well. Keep in mind that most babies leaving the ICN develop into healthy, normal children.

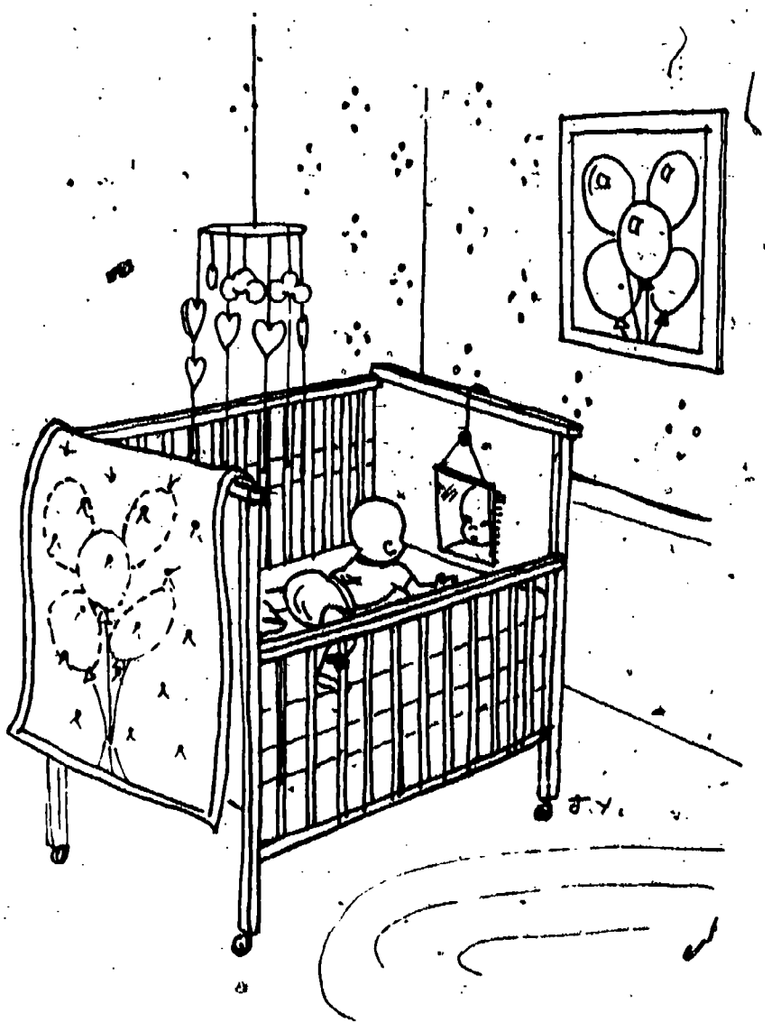
If you continue as you did in the ICN observing your baby's behavior and doing things to help him learn, your baby can develop to the fullest. The most important experience for you as a parent will be to enjoy your very special baby's growth and the taking of each new developmental step which you have helped encourage since your baby's first weeks of life in the Intensive Care Nursery.

What You Can Do For Your Baby

At this stage your baby has become more settled in his new home. The following activities are designed to help you encourage your baby's movement, language development, looking and reaching.

1. SETTING UP THE ENVIRONMENT

Your baby may be more active and interested in his surroundings. It is important to plan his environment and to continue to bring in items for him to play with and look at. The following are some suggestions your baby may like.



- CHANGE PICTURES AND TOYS IN THE BABY'S CRIB EVERY FEW DAYS. BABIES GET BORED TOO!

- HANG A SMALL UNBREAKABLE MIRROR IN THE BABY'S CRIB WHERE HE CAN LOOK AT HIMSELF, OR GIVE HIM TIME IN FRONT OF A BIG MIRROR

- VARY THE BABY'S POSITION. PROVIDE TIME ON HIS BACK, TUMMY AND SIDES. PROVIDE OPPORTUNITES IN AN UPRIGHT POSITION USING AN INFANT SEAT - USE AN INFANT SEAT ONLY WHEN THE BABY IS AWAKE

- VARY THE BABY'S LOCATION IN THE HOUSE. WHEN BABY IS AWAKE, KEEP HIM WITH YOU WHEN YOU SPEND TIME IN DIFFERENT ROOMS

2. ENCOURAGING MOVEMENT

As your baby's muscles become stronger he may become anxious to try new positions and to reach and touch. Here are some activities your baby may like.

- PLACE THE BABY ON HIS TUMMY ON A BLANKET WITH TOYS AROUND HIM. ENCOURAGE HIM TO RAISE HIS HEAD, SUPPORT HIMSELF ON HIS ARMS, AND LATER TO REACH TOWARD TOYS IN FRONT OF HIM

- HANG DANGLING TOYS WHERE THE BABY CAN KICK THEM WITH HIS FEET, OR REACH THEM WITH HIS HANDS

- CARRYING AND MOVING YOUR BABY AROUND THE HOUSE ENCOURAGES MUSCLE CONTROL. CARRY HIM IN YOUR ARMS, AT YOUR SHOULDER OR IN A BABY CARRIER WHILE YOU WORK AROUND THE HOUSE

3. ENCOURAGING LANGUAGE DEVELOPMENT :

The sound of your voice is both comforting and stimulating to your baby. He may try and imitate your sounds or join in during a song with his baby talk. Talking to your baby and playing word games can encourage later speech development. Here are some activities your baby may like.

- AS YOU ENTER THE ROOM, CALL THE BABY'S NAME, ENCOURAGE HIM TO LOOK AND TURN TOWARDS YOU

- DURING AND AFTER ROUTINE ACTIVITIES (SUCH AS DIAPERING) SPEND A FEW MINUTES FACE TO FACE WITH YOUR BABY. PLAY, SMILE, TICKLE, AND TALK TO YOUR BABY. TOUCH AND NAME BODY PARTS, E.G. NOSE, HANDS, FEET

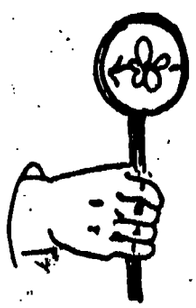
- IF THE BABY COOS OR MAKES OTHER SOUNDS, IMITATE THEM OR RESPOND TO THEM IMMEDIATELY TO ENCOURAGE HIM TO MAKE MORE SOUNDS

- TALK TO THE BABY ABOUT WHAT HE SEES, HEARS AND EXPERIENCES - EVEN THOUGH HE CAN'T UNDERSTAND ALL OF YOUR WORDS YET

- SET ASIDE A TIME EACH DAY FOR QUIET PLAY WITH YOUR BABY

4. LOOKING AND REACHING

Babies at this age like bright colors and simple clear patterns to look at. Objects need to be fairly close to the baby to encourage batting, touching and reaching as well as looking. Here are some things your baby may like to look at.



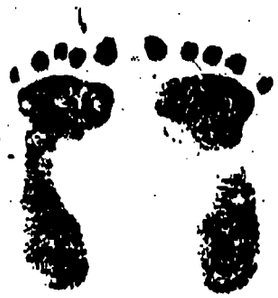
- GIVE BABY PRACTICE IN WATCHING A MOVING OBJECT, SUCH AS YOUR FACE OR A TOY AS IT MOVES SIDE TO SIDE, UP AND DOWN AND IN A LARGE CIRCLE

- HANG A CRADLE GYM OR DANGLING TOYS IN THE BABY'S CRIB, OR NEAR THE INFANT SEAT. TOYS SHOULD BE NEAR THE BABY'S HAND SO HE CAN REACH OUT FOR THEM. TOYS THAT MAKE NOISE WHEN MOVED ARE MOST INTERESTING

- PLACE A SMALL RATTLE IN THE BABY'S HAND TO GRASP, MOVE AND LOOK AT

- HANG A TOY OR BRIGHT OBJECT OVER THE CHANGING TABLE FOR BABY TO LOOK AT AND TOUCH WHILE YOU DIAPER HIM

- OFFER TOYS OF A VARIETY OF TEXTURES, COLORS AND PATTERNS FOR HIM TO EXPLORE



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Handicapped Children's Early Education Programs Overview and Directory. Available from Special Education Programs, U.S. Department of Education, 400 Maryland Ave., S.W., Washington, D.C. 20202.

NEWSLETTERS AND MAGAZINES

Down's Syndrome News, P.O. Box 1527 Brownwood, Texas. Newsletter written by parents and professionals.

Sharing Our Caring, P.O. Box 196 Milton, Washington 98354, Newsletter written by parents with practical views on raising a child with Down's Syndrome.

The Exceptional Parent, 296 Boylston Street, 3rd Floor, Boston, Mass. 02116. Written for parents and professionals who care for children who have a wide variety of disabilities.

TOYS AND PLAY MATERIALS

Johnson and Johnson Child Development Toys (Playpath Toys). Order catalogue from Johnson and Johnson, Child Development Toys, Customer Service Center, 6 Commercial Street, Hicksville, New York 11801.